The 1st Annual Meeting of BRICS IBD Consortium

18-20 November, 2021 Shanghai, China

CONTENTS

WELCOME MESSAGE

Dear Colleagues,

It is with great regret that we have decided to host a hybrid congress of 1st Annual Meeting of the Brazil-Russia-India-China-South Africa IBD Consortium (BRICS IBD 2021) due to the COVID-19 pandemic. We have changed the agenda accordingly. BRICS IBD 2021 will be held virtually and on-site from Nov. 18-20, 2021. As we prioritize participants' safety and health, this difficult decision has been made to ensure a safe congress.

The Governing Board of BRICS IBD Consortium is delighted to host this international meeting of the latest update in IBD. This meeting will provide a support network for IBD specialists in Brazil, Russia, India, China and South Africa on clinical and basic research together with communication through online and entitative resources. The aims of this meeting are to exchange experience and knowledge of in inflammatory bowel diseases with specialists in developed areas, and to provide a truly global perspective and an opportunity for clinicians and researchers from BRICS countries to present their research and interact with participants over the world. There will also be excellent opportunities for clinicians and researchers to get up-to-date information and education with the diagnosis and management of inflammatory bowel disease at the exciting meeting and multiple workshops.

The theme of BRICS IBD 2021 "Horizon of Inflammatory Bowel Disease in BRICS" encourages all participants sharing their latest clinical experiences and basic opinions in inflammatory bowel disease. We sincerely hope that you will show in the virtual congress BRICS IBD 2021. Your presence will be a truly worthwhile experience. Undoubtedly, the success of the BRICS IBD 2021 is due to the enthusiasm and generosity of the scientists and clinicians who attend. We therefore encourage you to participate and contribute to this amazing success.

We look forward to seeing you all.

Yours sincerely,

Zhihua Ran
President
The Brazil-Russia-India-China-South Africa
IBD Consortium

Kaichun Wu
Congress President

ORGANIZATION

BRICS IBD Consortium Governing Board

President:	Zhihua Ran (China)
President-elect:	Flavio Steinwurz (Brazil)
Secretary:	Gill Watermeyer（South Africa）
Member:	Vineet Ahuja (India)
	Marina Shapina (Russia) (Treasurer)

Honorary Member

Claudio Fiocchi (USA)

Active Members

Brazil	Adérson Damião	Heitor de Souza	Marco Antônio Zerôncio
	Genoile Santana	Marta Machado	
Russia	Elena A. Belousova	Oleg V. Knyazev	Irina V. Gubonina
	Diana I. Abdulganieva	Armen Vardanyan	
India	Rakesh Kocchar	Ajit Sood	Govind Makharia
	Uday Ghoshal	Saurabh Kedia	
China	Kaichun Wu	Minhu Chen	Weiming Zhu
	Jie Zhong	Yufang Wang	
South Africa	Adam Boutall	Adam Mahomed	Chris Kassianidis
	David Epstein	Mashiko Setshedi	

BRICS IBD Consortium Committees

Translational Committee

Chair:	Heitor de Souza (Brazil)		
Members:	Yufang Wang (China)	Govind Makharia (India)	Irina V. Gubonina (Russia)
	Mashiko Setshedi (South Africa)		

Clinical Committee

Chair:	Adam Mohammed (South Africa)		
Members:	Genoile Santana (Brazil)	Jie Zhong (China)	Ajit Sood (India)
	Elena A. Belousova (Russia)		

Education Committee

Chair: Diana I. Abdulganieva (Russia)
Members: Marco Antônio Zerôncio (Brazil), Xiang Gao (China), Rakesh Kochhar (India), Chris Kassianidis (South Africa)

Surgery Committee

Chair: Weiming Zhu (China)
Members: Rogerio Saad Hossne (Brazil), GV Rao (India), Armen Vardanyan (Russia), Adam Boutall (South Africa)

Patients Management Committee

Chair: Uday Ghoshal (India)
Members: Marta Machado (Brazil), Yan Chen (China), Oleg V. Knyazev (Russia), David Epstein (South Africa)

Organization of the 1st Annual Meeting of BRICS IBD Consortium

BRICS IBD Consortium President Zhihua Ran
Congress President Kaichun Wu
Congress Secretary Jun Shen Jie Liang

Organization Committee (alphabetically)

Qian Cao	Minhu Chen	Min Chen	Yan Chen	Weiguo Dong	Xiang Gao	Yubei Gu
Ying Han	Yao He	Pinjin Hu	Yiqun Hu	Ying Huang	Jin Li	Yue Li
Jie Liang	YulanLiu	Ren Mao	Jiaming Qian	Yuqi Qiao	Zhihua Ran	Jun Shen
Feng Tian	Fangyu Wang	Huahong Wang	Yingde Wang	Yufang Wang	Kaichun Wu	Xianrui Wu
Lu Xia	Fang Xiao	Hong Yang	Yunsheng	Yang Lingna Ye	Chenggong Yu	Xiaoqi Zhang
Yan Zhang	Qing Zheng	Changqing Zheng	Min Zhi	Weiming Zhu		

International Program Committee (alphabetically)

Claudio Fiocchi (USA), Flavio Steinwurz (Brazil), Gill Watermeyer (South Africa), Marina Shapina (Russia), Vineet Ahuja (India)

CORPORATE ORGANIZATION

Hosted by

Corporate Sponsors

GENERAL INFORMATION

DATE |
November 18-20, 2021

VENUE |
Shanghai Marriott Hotel Parkview
333 Guang Zhong Road West,
Jing'an District, Shanghai, China, 200072
TEL: +86-21-3669 8888

OFFICIAL LANGUAGE OF MEETING | EN
English

HOSTED BY |
Brazil-Russia-India-China-South Africa IBD Consortium (BRICS)
Chinese Society of Inflammatory Bowel Disease (CSIBD)
BRICS Technology Transfer Center
Beijing Science and Technology Innovation Medical Development Foundation (BMAF)

BAGDE |
For recognition, all participants are required to wear the badges at all times during the meeting period.
IDENTIFICATION

RED	FACULTY
BLUE	DELEGATE
GREEN	EXHIBITOR
YELLOW	STAFF

REGISTRATION DESK |
Registration desk is available at *1F, Shanghai Marriott Hotel Parkview*, opening hour as following,

Thursday, Nov. 18, 2021	Friday, Nov. 19, 2021	Saturday, Nov. 20, 2021
12:00-18:00	09:00-18:00	07:30-18:00

MEETING ORDER |
Please closure handset or adjust to the static condition of your mobile devices during the meeting.

CAMERA AND RECORDING |
Any kind of video recording is NOT ALLOWED in either session rooms.
Photography for commercial purposes are NOT ALLOWED in either session rooms.

E-POSTER SESSION |
E-Poster are exhibited at the *2F, Meeting Room Foyer,* session times are as following,
13:00-18:00, Nov. 19, 2021
08:00-18:00, Nov. 20, 2021

EXHIBITION AREA |
Exhibition area is situated on *2F, Meeting Room 4* and will open as following,
13:00-18:00, Nov. 19, 2021
08:00-18:00, Nov. 20, 2021

MEETING LUNCH |
Lunch box will be provided on Nov. 20 at the *Meeting Room Foyer*. Lunch coupon is required upon collect the lunch box.

LOST & FOUND |
For any assistance with missing items, please visit our secretariat office at *1F, Registration Counter.*

MEETING WIFI |
Free Wi-Fi is available at all public area.
User name: MarriottBonvoy
Code: MARRIOTT2021N

LIABILITY & INSURANCE |
The Meeting Secretariat and Organizers could not accept liability for personal accidents or loss or damage to private property of participants and accompanying persons. Participants are advised to take out their own personal travel and health insurance for their trip.

VIRTUAL MEETING
Visiting http:*//www.bricsibd.org/2021/VIRTUAL/ for live meeting.*

SECRETARIAT of the BRICS 2021 |
BRICS IBD Consortium Secretary
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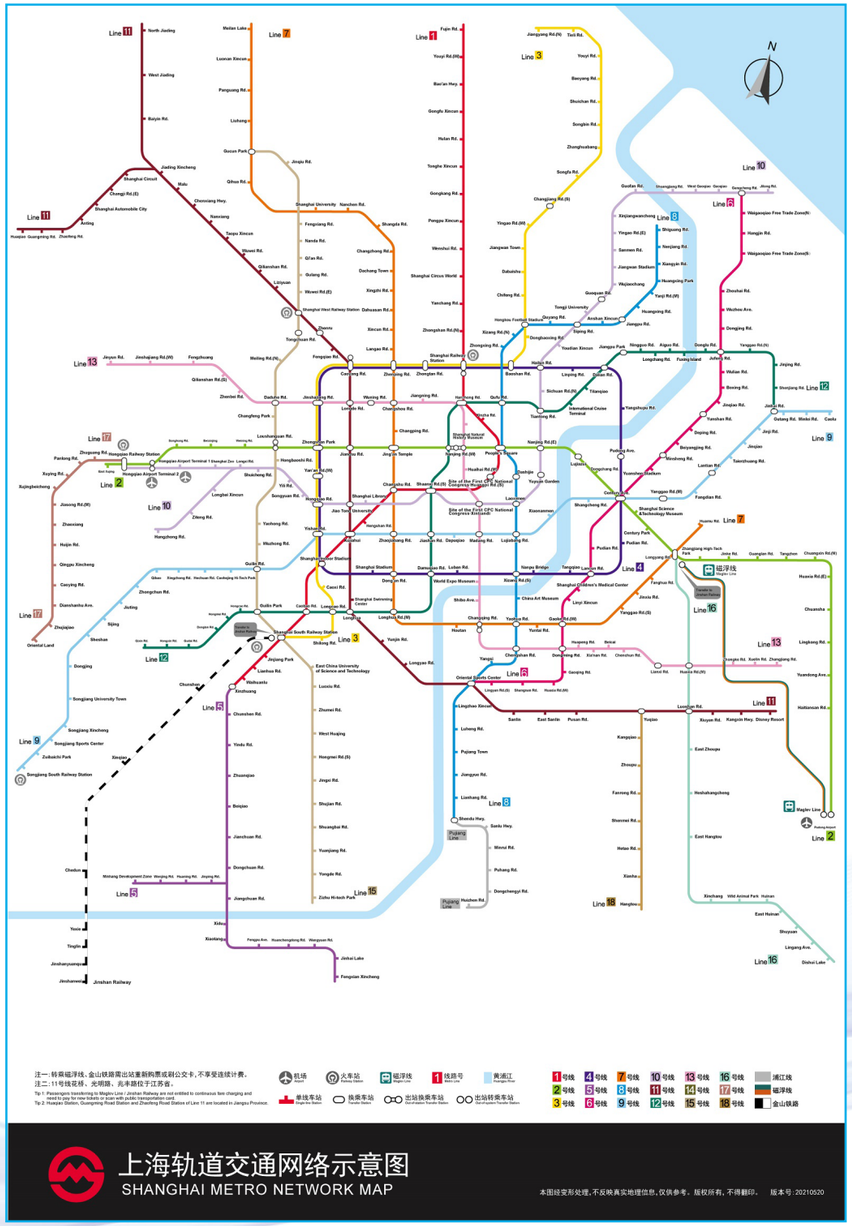
PUBLIC TRANSPORTATION |

The Shanghai subway is modern, clean, efficient and very safe. All the metro signage and announcements on the trains are clearly given in Chinese and English.When in rush hour, you'd better choose other means of transportation.

The rush hour in Shanghai: 07:00-09:30 AM 05:00-07:00 PM



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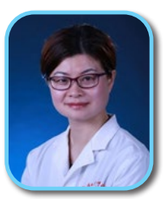

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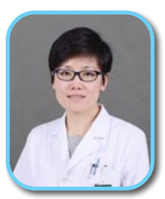

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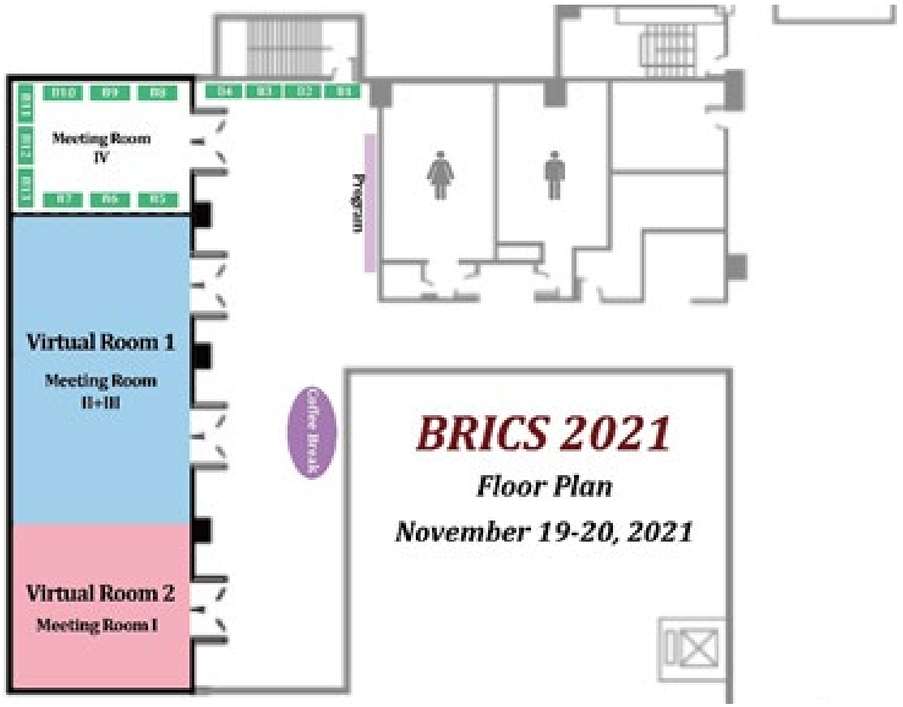
FLOOR PLAN



Meeting Room I (Virtual Room 2)

Nov. 19, 2021

· Challenge Cases

Nov. 20, 2021

· BRICS Debates
· Basic Forum
· Lunch Symposium (by Janssen)
· Young Investigator & Education Forum

Meeting Room II+III (Virtual Room 1)

Nov. 19, 2021

· BRICS Satellite Forum (by Abbvie)
· BRICS Satellite Forum (by Janssen)
· IPSEN IBD Literature Reading Sharing Meeting

Nov. 20, 2021

Opening Ceremony
· Clinical Forum I
· Clinical Forum II
· Lunch Symposium (by Takeda)
· BRICS Forum I
· BRICS Forum II
· Next Target of IBD for BRICS
Closing Remarks

Program at a Glance

Time	18-Nov	19-Nov		20-Nov	
All Day	Registration	Registration		Registration	
08:00		Surrounding Activities		Opening Ceremony	
09:00				Clinical Forum I	BRICS Debates
10:00				Coffee Break	
11:00				Clinical Forum II	Basic Forum
12:00				Luncheon Symposium I	Luncheon Symposium II
13:00		BRICS Satellite Forum		BRICS Forum I	Young Investigator & Education Forum
14:00					
15:00		Coffee Break		Coffee Break	
16:00		BRICS Satellite Forum	Challenge Cases	BRICS Forum II	
17:00				Next Target of IBD for BRICS	
18:00	Registration			Closing Remarks	
19:00		Surrounding Activities			
20:00					
21:00					

SCIENTIFIC PROGRAM

The 2021 Annual Meeting of Brazil-Russia-India-China-South Africa Consortium
DAY 1 Friday, Nov 19th 2021

09:00 – 18:00	Registration

Time	Virtual Room 1	Virtual Room 2
	BRICS Satellite Forum (by Abbvie) **Clinical decision support for Crohn's disease** **Chair:** **Zhihua RAN (China)** **Vineet AHUJA (India)**	
13:25 – 13:30	Welcome **Zhihua RAN (China)**	
13:30 – 13:50	Individualized management of CD: heterogeneity of disease **Yao HE (China)**	
13:50 – 14:10	Tight control of biologics: what indicators shall we focus on **Jean-Frederic COLOMBEL (USA)**	
14:10 – 14:30	Biologics in combination with thiopurines: when and how? **Ajit SOOD (India)**	
14:30 – 14:50	Medical and surgical management of perianal Crohn's disease **Xiaoqi ZHANG (China)**	
14:50 – 15:10	Optimizing perioperative management in CD surgery **Weiming ZHU (China)**	
15:10 – 15:30	Pathways beyond anti-TNFs, JAK pathways and other for biologics **Claudio FIOCCHI (USA)**	
15:30 – 15:35	Closing Remarks **Vineet AHUJA (India)**	
15:35 – 15:55	Coffee Break	

The 2021 Annual Meeting of Brazil-Russia-India-China-South Africa Consortium
DAY 1 Friday, Nov 19th 2021

Time	Virtual Room 1	Virtual Room 2
		Challenge Cases **Chair:** **Qian CAO (China)** **Fangyu WANG (China)** **Panel discussion:** **Feng TIAN (China)** **Jun SHEN (China)** **Jin LI (China)** **Yiqun HU(China)**
	BRICS Satellite Forum (by Janssen) **Novel therapeutic targets for IBD** **Chair:** **Kaichun WU (China)** **Gillian WATERMEYER (South Africa)**	
15:55 – 16:00	Welcome **Kaichun WU (China)**	Welcome **Fangyu WANG (China)**
16:00 – 16:20	Define the quality of IBD center: what should we do? **Minhu CHEN (China)**	Case I **Xianrui WU (China)**
16:20 – 16:40	Future targets for biologics in mucosal healing of Crohn's disease **Charlie LEES (UK)**	Case II **Yubei GU (China)**
16:40 – 17:00	Understanding treat-to-target and how can we get **Marina SHAPINA (Russia)**	Case III **Min CHEN (China)**
17:00 – 17:20	Biologics for ulcerative colitis – stratification for application? **Yufang WANG (China)**	Case IV **Armen VARDANYAN (Russia)**
17:20 – 17:40	Utility of ERAS after inflammatory bowel disease operations **Xianrui WU (China)**	Case V **Saurabh KEDIA (India)**
17:40 – 18:00	How do we sequence biologic therapies? **Gillian WATERMEYER (South Africa)**	Case VI **Adam BOUTALL (South Africa)**
18:00 – 18:05	Closing Remarks **Gillian WATERMEYER (South Africa)**	Closing Remarks **Qian CAO (China)**

Time	Virtual Room 1
18:30 – 21:30	IPSEN IBD Literature Reading Sharing Meeting **Invited Faculties:** **Minhu CHEN (China), Kaichun WU (China), Zhihua RAN (China)** **Xiaoqi ZHANG (China), Jun SHEN (China)**

The 2021 Annual Meeting of Brazil-Russia-India-China-South Africa Consortium
DAY 2 Saturday, Nov 20th 2021

Time	Virtual Room 1	Virtual Room 2
07:00 – 21:00	Registration	
08:20 – 08:30	Opening Ceremony **Zhihua RAN (China)** **Kaichun WU (China)**	
	Clinical Forum I Ulcerative colitis treatment: an insight into daily clinical practice **Chair:** **Minhu CHEN (China)** **Yunsheng YANG (China)**	BRICS Debates **Chair:** **Claudio FIOCCHI (USA)** **Flavio STEINWURZ (Brazil)** **Yingde WANG (China)**
08:30 – 08:50	Novel potential biomarkers for the diagnosis and monitoring ulcerative colitis **Kaichun WU (China)**	08:30 – 08:45 Combined two biologics when resources are sufficient **Yuqi QIAO (China)** 08:45 – 09:00 No need for the combination of two biologics **Genoile SANTANA (Brazil)**
08:50 – 09:10	Four stages of inflammatory bowel diseases **Gilaad KAPLAN (Canada)**	09:00 – 09:15 Maintain biologics when low through level **Natalia QUEIROZ (Brazil)** 09:15 – 09:30 Shift to immnosuppresants when low through level **Lingna YE (China)**
09:10 – 09:30	Evolving concepts in ulcerative management **Silvio DANESE (Italy)**	
09:30 – 09:45	Best Abstract I Relapse rates after withdrawal of thiopurines in patients with inflammatory bowel disease **Mukesh Kumar RANJAN (India)**	09:30 – 09:45 B1 phenotype in CD: which biologic agent may be prior **Marjorie ARGOLLO (Brazil)**
09:45 – 10:00	Best Abstract II Excessive mitochondrial fission suppresses mucosal repair through impairing butyrate metabolism of colonocytes in UC **Shichen FU (China)**	09:45 – 10:00 B1 phenotype in CD: equal choice for each biologic agent **Fang XIAO (China)**
10:00 – 10:30	Coffee Break	

The 2021 Annual Meeting of Brazil-Russia-India-China-South Africa Consortium
DAY 2 Saturday, Nov 20th 2021

Time	Virtual Room 1	Virtual Room 2
	Clinical Forum II Optimize treatment and disease activity monitoring of CD **Chair:** **Jiaming QIAN (China)** **Zhihua RAN (China)**	Basic Forum Translational markers from bench to bedside **Chair:** **Weiguo DONG (China)** **Yulan LIU (China)** **Chenggong YU (China)**
10:30 – 10:50	Dilemma for curing perianal Crohn's Disease **Zhihua RAN (China)**	Manipulating resident microbiota to enhance regulatory immune function for IBD **Rakesh KOCHHAR (India)**
10:50 – 11:10	Is proactive TDM a pseudo-proposition for Crohn's disease? **Charlie LEES (UK)**	The fundamental for intestinal fibrosis **Ren MAO (China)**
11:10 – 11:30	What can we learn from SECURE-IBD? **David RUBIN (USA)**	Long noncoding RNAs involved in the pathogenesis of IBD **Min ZHI (China)**
11:30 – 11:45	Best Abstract III Small Intestinal Bacterial Overgrowth, A Predictor of Clinical Relapse in Patients with quiescent Crohn's Disease **Jing FENG (China)**	Best Abstract V Endoscopic and Histologic Response and Remission Rates in Ulcerative Colitis Patients Treated with Tofacitinib: Real-World Data from a Tertiary Center **Nathaniel Aviv COHEN (USA)**
11:45 – 12:00	Best Abstract IV Inflammatory Bowel Disease: Three Decadal Status and Trends from Global Burden of Disease Study 2019 **Khushdeep DHARNI (India)**	Best Abstract VI Role of glucocorticosteroids dose escalation in the development steroid dependence and resistance in patients with ulcerative colitis. **Irina TISHAEVA (Russia)**
Time	**Virtual Room 1**	**Virtual Room 2**
	Lunch Symposium (by Takeda) Optimize management of IBD: from emerging evidence to clinical practice **Chair:** **Jiaming QIAN (China)** **Kaichun WU (China)**	Lunch Symposium (by Janssen) Biological therapies: from the initial to the future **Chair:** **Minhu CHEN (China)** **Huahong WANG (China)**

12:00 – 12:25	Targeting progression of IBD to improve patient outcomes **Zhihua RAN (China)**	Monitoring of anti-TNF antibody: when and how to handle **David RUBIN (USA)**
12:25 – 12:50	Early intervention optimizes UC patients' outcomes **Yan CHEN (China)**	Pathways beyond anti-TNFs, IL pathways and other for biologics **Charlie LEES (UK)**
12:50 – 13:15	An evidence-based approach to changing clinical course in CD **Silvio DANESE (Italy)**	Can histological healing be achieved in CD? **Jean-Frederic COLOMBEL (USA)**

The 2021 Annual Meeting of Brazil-Russia-India-China-South Africa Consortium
DAY 2 Saturday, Nov 20th 2021

Time	Virtual Room 1	Virtual Room 2
	BRICS Forum I IBD TB issues in BRICS and the West **Chair:** **Pinjin HU (China)** **Ying HAN (China)** **Yao HE (China)**	Young Investigator & Education Forum Evaluation and traditional intervention in IBD **Chair:** **Yufang WANG (China)** **Lu XIA (China)**
13:30 – 13:50	Concomitant infection differences in developing and developed areas **Hong YANG (China)**	Use of antidepressants in the treatment of depression with IBD **Gilaad KAPLAN (Canada)**
13:50 – 14:10	Monitoring and managing IBD associated TB: the practice in India **Vineet AHUJA (India)**	Exploring endoscopic therapy for Crohn's disease strictureplasty **Yan ZHANG (China)**
14:10 – 14:30	Monitoring and managing IBD associated TB: the practice in Brazil **Genoile SANTANA (Brazil)**	Benefit and complications for capsule endoscopy for IBD **Yue LI (China)**
14:30 – 14:50	Monitoring and managing IBD associated TB: the practice in Russia **Diana ABDULGANIEVA (Russia)**	Does 5-ASA really useless for Crohn's disease (by CMS) **Jie LIANG (China)**
14:50 – 15:10	Monitoring and managing IBD associated TB: the practice in China **Qian CAO (China)**	Selective S1P receptor modulators-drive a new era in UC treatment (by Everest Medicines) **Jun SHEN (China)**
15:10 – 15:30	Monitoring and managing IBD associated TB: the practice in South Africa **Vikash LALA (South Africa)**	Treatment of pediatric Crohn's disease: what should differ from adults **Ying HUANG (China)**
15:30 – 15:50	Coffee Break	

The 2021 Annual Meeting of Brazil-Russia-India-China-South Africa Consortium
DAY 2 Saturday, Nov 20th 2021

Time	Virtual Room 1
	BRICS Forum II Clinical decision support for IBD **Chair:** **Marina SHAPINA (Russia)** **Qing ZHENG (China)** **Changqing ZHENG (China)**
15:50 – 16:10	Mercaptopurine concentration monitoring and adverse events prediction for IBD **Xiang GAO (China)**
16:10 – 16:30	Thalidomide as second-line therapy for CD: from mechanism to effectiveness **Mashiko SETSHEDI (South Africa)**
16:30 – 16:50	Pathogenic and therapeutic role of the Microbiome **Heitor SOUZA (Brazil)**
16:50 – 17:10	Choosing strategy in IBD when steroids have failed **Irina GUBONINA (Russia)**

Time	Virtual Room 1
	Next Target of IBD for BRICS **Chair:** **Zhihua RAN (China)** **Kaichun WU (China)**
17:10 – 17:16	Next Target of IBD in BRICS – establish a smooth connection within BRICS **Elena BELOUSOVA (Russia)**
17:16 – 17:22	Next Target of IBD in BRICS – communication with other organizations **David EPSTEIN (South Africa)**
17:22 – 17:28	Next Target of IBD in BRICS – how to set up standardized medical treatment **Flavio STEINWURZ (Brazil)**
17:28 – 17:34	Next Target of IBD in BRICS – optimize surgical treatment **Weiming ZHU (China)**
17:34 – 17:40	Next Target of IBD in BRICS – from bench to translation **Govind MAKHARIA (India)**
17:40 – 17:55	Panel discussion **Elena BELOUSOVA (Russia) Minhu CHEN (China)** **David EPSTEIN (South Africa) Kaichun WU (China)** **Govind MAKHARIA (India) Zhihua RAN (China)**

Time	Virtual Room 1
17:55 – 18:00	Closing Remarks **Kaichun WU (China)** **Zhihua RAN (China)**

Virtual Room 1

BRICS Satellite Forum (by Abbvie)
Clinical decision support for Crohn's disease

BRICS IBD Consortium

Tight control of biologics: what indicators shall we focus on

Jean-Frederic COLOMBEL (USA)
the Susan and Leonard Feinstein Inflammatory Bowel Disease Clinical Center

The concept of "tight control" of biologics is intimately linked to the "treat to target" one. The principle is that treating to a pre-defined treatment target is associated with optimal long-term outcomes and ongoing and regular monitoring of the target and/or surrogate marker is needed with optimisation of treatment as long as the target is not reached. Up to now, tight control is mostly based on clinical symptoms and on biomarkers such as CRP and fecal calprotectin. There is still controversy whether or not pro-active drug monitoring (TDM) should be added since prospective studies comparing pro-active to reactive TDM have been negative. Novel methods are currently emerging to optimize tight-control mostly based on non-invasive imaging such as ultrasound.

Biologics in combination with thiopurines: when and how?

Ajit SOOD (India)
Dayanand Medical College & Hospital, Ludhiana

Biologics have emerged as most effective therapy for patients with IBD. However, loss of response related to development of antibodies is an issue with biologics, more so with anti-TNF agents. To overcome this problem of immunogenicity and to restore the response, immunomodulators like thiopurines have been used as an add-on therapy with biologics.

Thiopurines help in improving drug pharmacokinetics and immune regulation, thereby improving the drug trough levels and lowering the anti drug antibodies, resulting in improved efficacy. Landmark studies like SONIC and UC-SUCCESS have documented the higher efficacy of combination therapy of infliximab and azathioprine for Crohn's disease and ulcerative colitis respectively. Data for improving the efficacy by using combination of adalimumab and thiopurines is equivocal.

The practices on dose, duration and de-escalation of combination therapy of biologics and thiopurines are variable.

Though combination therapy improves the efficacy, adverse effects like infections and development of lymphoma need to be considered.

Addition of thiopurines to anti-integrins (vedolizumab) and anti-IL 12/23 (ustekinumab) doesn't seem to be beneficial as per the currently available data.

Medical and surgical management of perianal Crohn's disease

Xiaoqi ZHANG (China)
The Affiliated Hospital of Nanjing University Medical School

Perianal disease has a high prevalence among patients with Crohn's disease, especially when the rectum is affected. It is associated with a worse prognosis, requiring more frequently biological treatments, especially in cases of complex perianal disease. This condition calls for more hospital admissions and the carrying out of complementary tests. The management of perianal CD requires a multidisciplinary approach with a combination of initial imaging and surgical assessment to adequately control local sepsis, optimization of biological therapy with adjunct antibiotics or immunomodulators, and close clinical follow-up with imaging to evaluate response to therapy and guide further surgical management options. The recommendations and evidence for guidelines for the management of perineal fistulas in Crohn's disease are quite heterogeneous, and guideline-developers would be well advised to address the above issues during future guideline development.

Optimizing perioperative management in CD surgery

Weiming ZHU (China)
Jinling Hospital,Nanjing

Timely operate on pts. with indications, indication include loss of response to medical treatment, recurrent stenosis with fibrosis unresponsive to EBD, Repeat attack of penetrating disease, Uncertain diagnosis or suspected malignancy, and Possible delay of puberty in children and adolescents.
Indications for emergent operation include, Acute penetration with diffuse peritonitis, Massive bleeding unresponsive to non-operative treatment Medical TX. to surgical pts unreasonable: Increase drug adverse reactions and postop complications,Cushing complex after corticosteroids, bone marrow suppression after AZA et al.
Disease progression or acute abdomen, nutritional status worsening, disease extent increase, acute exacerbation (intestinal perforation, obstruction, massive bleeding et al), Poor QOL, Target of treatment not achieved, Cancer risk increasing in IBD.
Optimizing patients before surgery: Risk factors of postop complications screened routinely in elective operation: Malnutrition, septic state, corticosteroid use, active disease and complicated anatomic visceral structure are risk factors of postop complications.
Prehabilitation strongly suggested for patients with above risk factors, EEN preferred, Infection or abscess controlled by antibiotics or drainage. Comprehensive reevaluation needed before surgery or after prehabilitation.
Staged surgery for failure of prehabilitation: Resection and enterostomy.
Goals of surgery in CD Primary goals: safe operation, without complications
Ultimate goals: longer recurrence-free survival Stratify pts by risk of recurrence
Independent risk factors of disease recurrence: Active smoker, history of intestinal resection, perforation as indication in 1st intestinal resection, Pts with perianal disease
Prognositc factors of postoperative recurrence: Short duration before surgery, young age at diagnosis, previous history of intestinal resection, history of massive resection(>50 cm), Residue lesion after intestinal resection should be treated actively
Stratification and early intervention in CD

Summary
Surgery is a therapeutic option, not a proof of treatment failure
Screening of postop complication should be performed routinely before operation
Timely operation to patients without risk factors of postop complications
Patients with risk factors of postop complications should receive prehabilitation
The goals of TXT are the same for GIologist and surgeon
CD： delay of recurrence; UC： normal QOL
Fundamental issue is free from postop complications
Stratify postop patients according to risk factors of recurrence and individualized recurrence prevention regimen accordingly

Virtual Room 1

BRICS Satellite Forum (by Janssen)
Novel therapeutic targets for IBD

BRICS IBD Consortium

Understanding treat-to-target and how can we get

Marina SHAPINA (Russia)
State Scientific Centre of Coloproctology

Understanding treat-to-target and how can we get Treat-to-target (T2T) is commonly known strategy not only in IBD but in different autoimmune and other disease. The main idea of this strategy is to set the optimal goal while choosing treatment and tight monitor if it is achieved or not. In IBD the first version of T2T was published in 2015 and named STRIDE strategy and in 2021 it was updated. Some goals and tight monitoring recommendations has been changed. This presentation demonstrates the review of the main concept and updates of T2T in IBD.

Biologics for ulcerative colitis – stratification for application?

Yufang WANG (China)
West China Hospital,Sichuan University

Biologics for Ulcerative Colitis——Stratification for Application？
Ulcerative Colitis (UC) is a progressive disease and it causes significant morbidity and a described low incidence of mortality. UC and Crohn's Disease has the same heavy disease burden. As the disease progresses, the risk of surgical resection and canceration of UC patients continues to accumulate. Long-standing UC is also associated with a defined risk of strictures. The development of UC is influenced by multiple factors. Disease extent may be related to higher cancer risk. Presence of EIMs in UC patients increased the risk of surgery and hospitalization. Patients with severity endoscopic lesions are at higher risk of colectomy. Predictors of an aggressive disease course and colectomy suggested by 2020AGA included young age at diagnosis (age < 40 years old), extensive disease, severe endoscopic activity (presence of large and/or deep ulcers), presence of extra-intestinal manifestations, early need for corticosteroids and elevated inflammatory markers. Biologics such as anti-TNF, vedolizumab, tofacitinib and ustekinumab were approved for UC. They should be preferred in moderately and severely patients with poor prognostic factors. Biologics reduced the use of corticosteroid and decreased the risk for hospitalizations, malignancy and surgery Interventions in Patients With UC. They can achieve clinical remission and mucosal healing. More and more evidence shows that UC is a progressive disease. UC management needs to do a good job of risk stratification to help patients with more timely biologics treatment. Biological agents can be used as soon as possible for UC with high-risk factors. The application of biologics can improve the long-term prognosis of UC.

How do we sequence biologic therapies?

Gillian WATERMEYER (South Africa)
Groote Shuur Hospital ,Cape Town

Monoclonal antibodies targeting tumour necrosis factor alpha (TNFα) have revolutionised the management of Inflammatory Bowel Disease (IBD) since the approval of infliximab for moderate-to-severe Crohn's disease in 1998. However, the use of anti-TNFs is limited by high rates of primary non-response, secondary loss of response over time, and the risk of serious and opportunistic infections. Over recent years several new treatment options have been approved for the management of IBD. These include vedolizumab, ustekinumab, tofacitinib, and recently in the United States ozanimod. Having several therapeutics options has raised questions on how available therapies should be positioned in the treatment of IBD. There are multiple factors that need to be considered when selecting a therapy such as efficacy, safety, patient and disease related factors, and cost. Results from head-to-head randomised controlled trials, real world evidence from cohort studies, and network meta-analyses may help guide therapeutic algorithms.

Virtual Room 1

Clinical Forum I
Ulcerative colitis treatment: an insight into daily clinical practice

Four stages of inflammatory bowel diseases

Gilaad KAPLAN (Canada)
University of Calgary

Inflammatory bowel disease (IBD) is a global disease; its evolution can be stratified into four epidemiological stages: Emergence, Acceleration in Incidence, Compounding Prevalence and Prevalence Equilibrium. In 2021, developing countries are in the Emergence stage, newly industrialized countries are in the Acceleration in Incidence stage, and Western regions are in the Compounding Prevalence stage. Western regions will eventually transition to the Prevalence Equilibrium stage, in which the accelerating prevalence levels off as the IBD population ages and possibly as a result of an unexpected rise in mortality during the COVID-19 pandemic. Mitigating the global burden of IBD will require concerted efforts in disease prevention and health- care delivery innovations that respond to changing demographics of the global IBD population. In this talk, I summarize the global epidemiology of IBD and use these data to stratify disease evolution into four epidemiological stages.

Virtual Room 1

Clinical Forum II
Optimize treatment and disease activity monitoring of CD

BRICS IBD Consortium

Dilemma for curing perianal Crohn's Disease

Zhihua RAN (China)
Shanghai Jiaotong University School of Medicine Renji Hospital

Perianal CD (PCD) encompasses a wide range of entities, including nonfistulizing (fissures, ulcers, and strictures) and fistulizing lesions (fistulas, abscesses, and rectovaginal fistulas). It is now well established that PCD is a predictive factor for a disabling disease course. More recently, several studies have shown that PCD drastically impairs these patients' quality of life. Initial evaluation of perianal CD includes classifying the fistula based on complexity and clinical symptoms, endoscopy to evaluate proctitis, imaging ideally with fistula protocol MR, and an EUA.

The management of perianal CD requires a multidisciplinary approach with a combination of initial imaging and surgical assessment to adequately control local sepsis, optimization of biological therapy with adjunct antibiotics or immunomodulators, and close clinical follow-up with imaging to evaluate response to therapy and guide further surgical management options

Nonbiologic medical management of perianal CD includes antibiotics, hyperbaric oxygen, and immunomodulators. Biologic therapy is the mainstay for medical management of perianal CD, with anti-TNFs as first-line therapy and Ustekinumab emerging as second line therapy. Definitive surgical management is ideally performed after medical control of luminal disease, and mesenchymal stem cell therapy is a promising approach currently being studied in clinical trials.

What can we learn from SECURE-IBD?

David RUBIN (USA)
University of Chicago Medicine

This presentation will review current knowledge on the effect of COVID-19 on patients with inflammatory bowel disease, including data from the SECURE-IBD global database. Patients with IBD should remain on therapy to reduce the risk of relapsing disease activity. It is advised to reduce corticosteroid usage to minimize the risk of severe COVID-19 outcomes. Vaccination is recommended and boosters may be considered. Current data show an equivalent safety profile for boosters as seen in primary vaccination. Patients with IBD should continue to follow masking, physical distancing, hand hygiene and other mitigation strategies based on local geographic COVID-19 prevalence rates.

Virtual Room 1

Lunch Symposium (by Takeda)
Optimize management of IBD: from emerging evidence to clinical practice

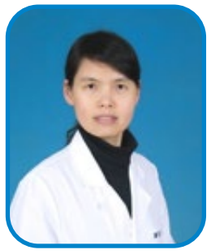
BRICS IBD Consortium

Targeting progression of IBD to improve patient outcomes

Zhihua RAN (China)
Shanghai Jiaotong University School of Medicine Renji Hospital

Inflammatory bowel disease (IBDs), encompassing Crohn's disease (CD) and ulcerative colitis (UC), are chronic and disabling disorders culminating in disease progression in many patients. The aim of current "treat-to-target" strategies is to avoid long-term bowel damage and subsequent disability by using appropriate therapy in high-risk patients and then closely monitoring and adjusting treatment according to predefined therapeutic objectives. Thus, early disease control to prevent disease progression could be critical.

Although we have made significant progress in treatment, particularly, the use of biologics in the management of IBD, significantly fewer patients with IBD followed treatment pathways that included biologic therapies and very few patients were ever initiated on biologic therapy. Several possible barriers to biologic initiation include patients' and providers' concerns over side effects, such as infection, malignances, and multiple steps needed to initiate and maintain biologics, fear of lack of efficacy or secondary loss of response to biologic therapy etc. In the real-world setting, first-line biologic therapy in biologic-naïve patients with UC and CD demonstrated that vedolizumab and anti-TNFα treatments were equally effective at controlling disease symptoms, but vedolizumab has a more favourable safety profile.



Early intervention optimize Ulcerative Colitis patient's outcomes

Yan Chen(China)
The Second Affiliated Hospital Zhejiang University School of Medicine

UC can have a high impact on patients' QoL and may be as disabling as CD.1 Treatment goals for patients with inflammatory bowel disease are continually evolving with the release of new data; in ulcerative colitis (UC), targeting deeper levels of remission may improve patient outcomes and has the potential to change the disease course.2 Histological remission and endoscopic remission are now recognized as effective targets for UC treatment and have recently been incorporated into the 'disease clearance' concept, along with clinical remission.3,4

Histological healing, one aspect of the 'disease clearance' concept, can be a clinically relevant goal in UC, as data show an association between histological healing and reduced risk of relapse, hospitalization, and colorectal cancer.5-8

In VARSITY, a Phase 3, randomized double-blind trial evaluating the efficacy and safety of vedolizumab versus adalimumab, VDZ was superior to adalimumab in achieving clinical remission and endoscopic improvement at week 52 in moderate to severe UC patients.9 A greater proportion of patients achieved histological remission with vedolizumab compared with adalimumab at Week 14 (16.7% vs 7.3%; p=0.0001) and Week 52 (29.2% vs 8.3%; p<0.0001).10 Furthermore, a post-hoc analysis of VARSITY showed a higher proportion of patients treated with vedolizumab achieved disease clearance at Week 52 compared with adalimumab (29.2% [95% CI 24.7–34.1%] vs 16.3% [95% CI 12.8–20.4]).11

In summary, UC is a progressive disease and has a window of opportunity for early intervention to potentially reduce inflammatory activity and bowel damage.12 Treatment goals in UC are evolving from symptom management towards disease clearance, a new concept in UC that encompasses clinical, endoscopic, and histological remission, may be a step towards altering UC disease progression.2 Recent data have demonstrated that disease clearance in UC is possible with currently available biologics.2

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An evidence-based approach to changing clinical course in Crohn's Disease

Silvio Danese(Europe)
Vita-Salute San Raffaele University

In the era of treat-to-target strategy, the choice of therapeutic endpoint remains essential in daily practice to prevent a disabling course of CD and to assess the efficacy of new treatments.1
(STRIDE) II recommendations advocate moving from short- to intermediate- and long-term treatment targets as the patient succeeds with each criteria.2 Transmural healing in CD has been newly recognized as important adjunctive measure but was not endorsed as formal new treatment targets.2
Following treat to treatment approach, biological treatments demonstrate that clinical response as an immediate treatment can be achieved in a significant proportion of patients, e.g. as shown in VISIBLE 2 study 82.6% of patients had clinical response to Vedolizumab IV induction (2 or 3 doses).3
Endoscopic response and biomarkers improvement recently included as intermediate targets in STRIDE II, are also achievable with biological treatments.2 Earlier treatments with biological therapy associated with better outcomes as demonstrated, for example, in VERSIFY, a Phase 3 open-label multicentre study assessing the efficacy of vedolizumab on endoscopic healing in CD. It showed that endoscopic remission rates where consistently greater in patients with shorter disease duration in vedolizumab treated CD patients.4 Recent studies suggest that complete or partial radiological response to medical therapy could be associated with significant reductions in long-term risk of hospitalization, surgery, or corticosteroid usage among small bowel CD patients.1 VERSIFY showed that vedolizumab induced transmural healing in patients with CD: at Week 52, 43% of patients with CD in the overall population and 62% in the anti-TNF-naïve population achieved transmural healing.5
Meta-analysis aimed to evaluated early use of anti-TNF vs later conventional treatment confirmed that early use of biological treatment in CD is associated with improved clinical remission rates.6 Victory Consortium, a retrospective, multicenter consortium of patients with CD showed an association between shorter disease duration and higher clinical response, steroid free remission and mucosal healing in vedolizumab-treated patients with CD.7
In summary, there is a window of opportunity to preventing disease progression in CD patients. Early intervention is associated with improved outcomes in patients including more ambitious targets as transmural healing.8

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Virtual Room 1

BRICS Forum I
IBD TB issues in BRICS and the West

BRICS IBD Consortium

Concomitant infection differences in developing and developed areas

Hong YANG (China)
Peking Union Medical College Hospital

Concomitant infection differences in developing and developed areas

The condition of concomitant infection, including clostridium difficile, tuberculosis, cytomegalovirus (CMV), and hepatitis B in patients with inflammatory bowel diseases (IBD) had something in difference between developing and developed areas. The prevalence of infectious diseases mentioned above was significantly higher in developing areas, especially Africa, Southeast Asia and South America. The prevalence of active tuberculosis in IBD patients receiving biologics was higher in India (8.8%), Brazil (6.5%) and South Africa (11.7%) than that in the United Kingdom (1.0%), and the overall prognosis was reported to be good. The incidence of CMV or clostridium difficile among hospitalized IBD patients was reported to be higher in China than that in the United States. The increase in rate of colectomy in IBD patients related to CMV co-infection seemed to be more significant in China (OR 7.55, 95%CI 1.59-30.67) compared to that in the United States (OR 2.58, 95%CI 1.83-3.63). The positive rate of HBsAg among IBD patients was higher in China (7.86%) than that of South Korea (3.7%) and Netherland (1.0%). The vaccination rate of HBV among IBD patients was lower in China (20.71%) than in South Korea (52.6%). And the awareness of vaccination practice was lacking in both China and South Korea. Still, there is lack in studies reporting the prevalence and outcome of concomitant infection in IBD in developing countries. We called for more investigations in the prevalence and clinical course, as well as diagnosis and treatment of concomitant infection among patients with IBD in developing areas

Monitoring and managing IBD associated TB: the practice in Brazil

Genoile SANTANA (Brazil)
Universidade of the State of Bahia

Brazil is an endemic country for TB. Furthermore, IBD incidence is increasing. Then, is crucial to prevent and monitoring IBD patients for active TB during treatment. The management of IBD patients with anti-TNF therapy is critical because the TNF play important role for the granuloma organization. In Brazil, a cohort prospective study showed an important risk for active TB in patients under anti-TNF, immunosuppressive therapy and with both drugs in combo therapy. The recommended treatment for latent TB is isoniazid in monotherapy for 6 months or 9 months depending on the physician option, but 9 months is recommended. In special cases (children, older than 50 years, liver disease, contacts of monoresistant and intolerant to isoniazid) rifampicin should be prescribed during 4 months. In case of active TB during IBD treatment is recommended to discontinue IBD therapy. The reintroduction of IBD therapy is discussed with multidisciplinary team evaluating the response to TB therapy and the IBD severity.

Monitoring and managing IBD associated TB: the practice in Russia

Diana ABDULGANIEVA (Russia)
Kazan State Medical University, Department of Internal Medicine

The presentation is about Monitoring and managing IBD associated TB: the practice in Russia 1. TB development in IBD patients is not associated with IBD course, features, IBD treatment. Risk of TB presentation depends on type of biological treatment. 2. Development of TB on TNF-alpha inhibitors has diverse clinical presentation and disease course. Cases with both features of the primary process and classic variants of tuberculosis characteristic of patients without immunosuppression have been noted. 3. TB monitoring of IBD patients on immunosuppressive therapy should include screening and monitoring of TB infection with tuberculosis preventive TB therapy and close monitoring of immunological probes (positive tuberculosis recombinant allergen test or Mantoux test (papule 15 мм or more) with additional risk factors (TB past medical history, post-TB changes in lungs)

Monitoring and managing IBD associated TB: the practice in South Africa

Vikash LALA (South Africa)
Charlotte Maxeke Johannesburg Academic Hospital

Inflammatory bowel disease (IBD) associated tuberculosis (TB) remains a diagnostic and therapeutic challenge in high TB burden countries. This is of particular relevance to clinicians in South Africa due to the high prevalence of HIV, a high prevalence of drug resistant TB and limited resources. We present local data highlighting the challenges pertaining to IBD associated TB and the association of TB with the use of biologic therapy in South Africa. Furthermore, we present our approach to monitoring and managing IBD associated TB based on local factors and experience.

Virtual Room 1

BRICS Forum II
Clinical decision support for IBD

BRICS IBD Consortium

Mercaptopurine concentration monitoring and adverse events prediction for IBD

Xiang GAO (China)
The Sixth Affiliated Hospital of Sun Yat-sen University

Thiopurines, mercaptopurine (MP) and azathioprine (AZA) are well established in the treatment of inflammatory bowel disease (IBD). However, up to 10%–30% patients discontinue therapy for the adverse events which mainly resulting from a wide inter-individual variability in thiopurine metabolism. We reviewed factors predicting the toxicity and provide therapeutic recommendations in IBD. There were significantly associations between thiopurine-induced leukopenia and TPMT or NUDT15 polymorphisms. Due to the difference in ethnics, pre- genotyping TPMT in Europe and pre-genotyping NUDT15 in Asia were potential preventive measures to reduce the risk of adverse events. A potential association between high 6 - thioguanine nucleotides (6 - TGN) (> 450 pmol/8*108RBC) or 6 - methylmercaptopurine (6 - MMP) (>5700 pmol/8*108RBC) levels and adverse events was observed, while most studies were conducted in Caucasians in whom NUDT15 polymorphisms are rare. Routine thiopurine metabolite measurement might be efficient in Europe. In Asia, patients with NUDT15 variants developed leukopenia independent of 6TGN. There was significant association between DNA-TG concentrations and thiopurine-induced leukopenia. Thus, quantification of DNA-TG might be a better strategy which can be applied to gauge thiopurine therapy in IBD patients in Asia.

Thalidomide as second - line therapy for CD: from mechanism to effectiveness

Mashiko SETSHEDI(South Africa)
University of Cape Town

Approximately 20-30% of patients with Crohn's disease do not respond to standard medical therapies including biologics. Thalidomide is an old drug with multiple immunomodulatory properties that is being increasingly used for the management of refractory CD. Here, a review of published data on the use and outcomes of thalidomide treatment in CD is presented.

Pathogenic and therapeutic role of the Microbiome

Heitor SOUZA (Brazil)
Clinical Mediciine Federal University of Rio de Janerio

In the last several years, the gut microbiota has become focus of major interest in the study of inflammatory bowel disease (IBD) pathogenesis, and technological advancements have allowed the characterization of gut microbiome abnormalities in patients with Crohn's disease (CD) and ulcerative colitis (UC). Samples from individuals with IBD, particularly CD display lower alpha diversity. Moreover, microbial dysbiosis index characterised by the differential relative abundance of specific taxa has been associated with disease severity. In addition, longitudinal analysis supports a dynamic behaviour of the gut microbiome, which fluctuates more in IBD patients. In the metabolome, metabolite pools are less diverse in individuals with IBD, paralleling observations for microbial diversity. Antibiotics can be efficacious in selected patients with IBD, such as for the induction of remission and treatment of flares, in the postoperative management, fistulizing disease, and treatment of infectious complications, among others, but usually for short term administration. Currently available probiotics potentially modulate dysbiosis in IBD, but their effects are transient and limited in most IBD subsets. Although faecal microbial transplantation emerges as a promising therapy for IBD, randomized clinical trials are still missing. While specific members of the intestinal microbiota affect experimental IBD, however, identifying microorganisms that are related to disease susceptibility and severity in humans remains a major challenge. Defining what is a healthy and what is a dysbiotic gut microbiome continues to represent a critical limitation. Future investigations must concentrate on defining metatranscriptomic and metabolomic profiles of IBD, in longitudinal analyses. As causality between dysbiosis and IBD has not been consistently established, additional studies will be necessary to define host-microbial relationships relevant to the development of IBD and responsive to therapeutic interventions.

Choosing strategy in IBD when steroids have failed

Irina GUBONINA (Russia)
Military Medical Academy n.a. S.M.Kirov

Systemic corticosteroids are successfully administered in the majority of patients with inflammatory bowel disease (IBD) presenting with a flare. Knowledge about treatment strategies in case of steroid nonresponse is therefore highly relevant. The currently recommended treatment strategies are own experience for steroid-resistant IBD are summarized in the Presentation.

Virtual Room 1

Next Target of IBD for BRICS

BRICS IBD Consortium

Next Target of IBD in BRICS – establish a smooth connection within BRICS

Elena BELOUSOVA (Russia)
Moscow Regional Research Clinical Institute

Key strategies for smooth connection and interaction within BRICS can be implemented in several ways: 1.Identify priority areas of mutual interest within BRICS in different fields, such as: - epidemiological studies - this will allow us to assess not only general epidemiological trends, but also interethnic similarities and differences. - scientific researches, for instance- study the clinical response to various biologics in IBD patients in BRICS. This may be interesting because the populations in our countries differ significantly from each other in contrast to the more homogeneous population in Europe -medical care - comparison of medical care systems for IBD patients in BRICS, development of optimal proposals/models on this issue taking into account the general BRICS needs and the features of national healthcare systems -education,exchange of clinical experience- "clinical observation program online": regular presentation of clinical cases from BRICS with comments from specialists from different countries 2.Hold regular meetings/ conferences by turns in each of BRICS countries, set a schedule of meetings 3. To establish temporary or permanent working groups in accordance with the selected priority areas with representatives from BRICS and with possible participation of colleagues from other countries for development and creating programs of further activities

Next Target of IBD in BRICS – communication with other organizations

David EPSTEIN (South Africa)
Vincent Pallotti Hospital & IBD Africa

IBD Africa is a non-profit organisation formed in 2019 with a mandate to improve the care of inflammatory bowel disease patients in South Africa and sub-Saharan Africa. The organisation is structured around three pillars: research, education and advocacy. Research involves accurate epidemiological data on inflammatory bowel disease in the region. Education focuses on IBD patient health literacy. Advocacy involves the training of patient advocates empowering them to challenge the many barriers posed by funders and regulators to evidence-based IBD care.

Next Target of IBD in BRICS – how to set up standardized medical treatment

Flavio STEINWURZ (Brazil)
Hospital Israelita Albert Einstein

We/re going to discuss standardization definition and the difficulties in its implementation when compared to personalized medicine as far as treatment is concerned. They can coexist harmoniously when some points are well defined. We're going to show the standardization advantages an risks and also the importance of personalized medicine. As an example we're going to mention very updated works that have been done in the field of IBD, using big data models and also artificial intelligence. Perhaps we can develop something in terms of treatment using that kind of experience which something that would bring a novelty way to standardize treatment, not only through expert opinion and review of the literature.

Virtual Room 2

Challenge Cases

BRICS IBD Consortium

Case I

Xianrui WU (China)
The Sixth Affiliated Hospital of Sun Yat-sen University

A Challenge Case of IBD
Will present a a challenge case of IBD patient. In the presentation, I will discuss the importance of MDT team in the management of IBD patients.

Case III

Min CHEN (China)
Zhongnan Hospital of Wuhan University

Great Mimicker of CD
This is a male, 19-years-old patient. Due to sudden abdominal pain and stop of anal exhaust, the patient was hospitalized and diagnosed as "terminal ileum perforation". Perforation with a diameter of about 0.5cm hole was found about 25cm away from cecum during emergency operation. Surgical pathology showed “longitudinal ulceration of terminal ileum in macroscopy” and “chronic active inflammation, full-thickness transmural inflammation and multiple non-caseous granulomas in microscopy”, which was diagnosed as Crohn’s disease. He presented at clinic two weeks after operation and asked for injection of infliximab to prevent the recurrence of CD. It seemed that this case met the diagnostic criteria of CD completely. However, this case turned out not to be Crohn's disease. So what is the final diagnosis? How did we find the real cause of terminal ileum perforation? We will reveal the answer and the whole analysis process.

Case IV

Armen VARDANYAN (Russia)
State Scientific Centre of Coloproctology

22 y.o. female with history of ulcerative colitis (UC) since 2017. Systemic & topical 5-ASA was used during the natural history of the disease. Acute severe UC (ASUC) since December 2018 following 24 weeks of gestation. At the time of admission - BMI=18,5; Blood stool > 6 per day; Temperature > 38C; Pulse – 95; Hb – 84 g/l; ESR – 42 mm/h; C-reactive protein – 59 mg/l; Albumin – 19 g/l . Response assessment on IV Steroids 2mg\day (90 mg). Clinical response on day 7 and deterioration on day 9. Emergency subtotal colectomy with end ileostomy was made with no complication during operation and in short-term period. Successful delivery on 39 week by cesarean section.

Case VI

Adam BOUTALL (South Africa)
University of Cape Town

A case presentation examining the management of short segment Crohn's disease in a low middle income country with particular reference to management in an environment that is TB endemic and limited access to biologic therapy.

Virtual Room 2

BRICS Debates

BRICS IBD Consortium

Combined two biologics when resources are sufficient

Yuqi QIAO (China)
Shanghai Jiaotong University School of Medicine Renji Hospital

Combined Two Biologics When Resources Are Sufficient

In recent years, biologics have been increasingly used in the treatment of inflammatory bowel disease. However, the limitations of single-agent application of biologics or immunosuppressive agents are becoming more and more apparent. There are many patients who cannot achieve the desired therapeutic effect when using biologics for single-drug treatment. This ratio may be as high as 50%. Some current studies suggest that the simultaneous application of two biologics may help improve the therapeutic effect. Although randomized controlled clinical studies are extremely limited, the results of existing clinical studies still provide feasible treatments for refractory inflammatory bowel disease.

No need for the combination of two biologics

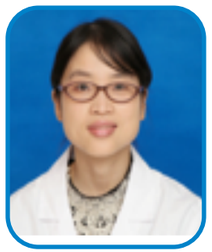
Genoile SANTANA (Brazil)
Universidade of the State of Bahia

The initial papers about combination of biological therapies came from rheumatology and dermatology with biological therapy that aren't indicated for IBD. There are concerns about efficacy, safety and resource applying this strategy. The knowledge about safety needs a long time of observation and the possibility of dual biological therapy is very recent. Now, we no need for the combination of two biologics. Currently, the need is for strong scientific evidence about this topic, new biological options, intensive treatment during the window of opportunity. Furthermore, the IBD interactome is a new concept defined as a disease network in which dysregulation of individual -omes causes intestinal inflammation mediated by dysfunctional molecular modules. Multiple - omes are available, enabling the integration of genomic, epigenomic, transcriptomic, proteomic, metabolomic and microbiome information to build a comprehensive molecular map of IBD. This approach will enable identification of IBD molecular subtypes, correlations with clinical phenotypes and elucidation of the central hubs of the IBD interactome that will aid discovery of compounds that can specifically target the hubs that control the disease. In Conclusion, there are no need for the combination of two biological therapy, but we need an individualized approach for patients with IBD.

Maintain biologics when low through level

Natalia QUEIROZ (Brazil)
Santa Cruz Hospital

Combined Two Biologics When Resources Are Sufficient
In recent years, biologics have been increasingly used in the treatment of inflammatory bowel disease. However, the limitations of single-agent application of biologics or immunosuppressive agents are becoming more and more apparent. There are many patients who cannot achieve the desired therapeutic effect when using biologics for single-drug treatment. This ratio may be as high as 50%. Some current studies suggest that the simultaneous application of two biologics may help improve the therapeutic effect. Although randomized controlled clinical studies are extremely limited, the results of existing clinical studies still provide feasible treatments for refractory inflammatory bowel disease.



Shift to immnosuppresants when low through level

Lingna YE (China)
Sir Run Run Shaw Hospital,Zhejiang University,School of Medicine

Biologic therapy when low trough level
How to do ? When should we shift to immunosuppressants?
How to manage low drug level in biologic therapy is a tough situation
Most important step is to evaluate disease activity:active or remission
When sustaining remission + low trough level,maybe shift to immunosuppressants

B1 phenotype in CD: which biologic agent may be prior

Marjorie ARGOLLO (Brazil)
Universidade Federal de São Paulo

Crohn's disease (CD) is a chronic and progressive condition. Positioning therapy in CD patients should take into account patient and disease characteristics, such as age, poor prognostic factors, extra-intestinal manifestations, comorbidities, among others. Advanced therapy with biological agents must consider both efficacy and safety profiles, in a personalized approach. It has been shown that all agents as first line biological therapy perform better on clinical and endoscopic responses, in contrast with previously biological failure patients. Few data are available regarding sequencing therapies in CD. Moreover, novel therapeutic targets have been suggested for the management of this group of patients including transmural healing. Strategy studies with a treat-to-target approach have also been designed and should access the role of biological drugs on disease modification, preventing disease progression with cumulative bowel damage and complications such as stenosis, fistula and abscess.

B1 phenotype in CD: equal choice for each biologic agent

Fang XIAO (China)
Gastroenterology of TONGJI Hospital

B1 phenotype in CD: equal choice for each biologic agent
Although there is emerging evidence as Predictors of primary response to different biologic treatment in the profiles of clinical manifestation, biomarkers, gene background and microbiota, there is no solid evidence to predict which active luminal Crohn's disease patient would get more benefit from one specific biologic other than other biologics. Clinical trials and data from the real world research have shown the efficacy and safety of biologic treatment [Anti-TNF, Vedolizumab, and Ustekinumab] in B1 phenotype CD. So, in the initial treatment for B1 phenotype CD patients, there is an equal choice for each biologic.

Virtual Room 2

Basic Forum
Translational markers from bench to bedside

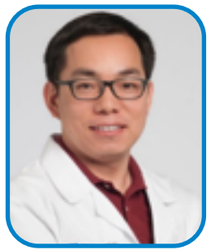
BRICS IBD Consortium

Manipulating resident microbiota to enhance regulatory immune function for IBD

Rakesh KOCHHAR (India)

IBD is a chronic inflammatory disease of the bowel which results in genetically predisposed individuals due to altered host processing of gut microbiota derived signals in addition to altered composition (dysbiosis) and function of the microbiota. Gut microbial diversity decreases and metabolic functions are altered in IBD and host immune function is deranged. Microbial dysbiosis occurs due to genetics, dietary factors, infection, drugs, environmental factors and stress. There is augmentation of aggressive organisms like E coli, Fusobacterium spp, Enterococcus faecalis, Caudovirales and Candida spp and decrease in regulatory microorganisms like Bifidobacterium spp, Lactobacillus spp, Bacteroides spp, Faecalibacterium prausnitzi etc. As yet it is not clear whether dysbiosis is a cause or a consequence of gut inflammation. Dysbiosis can per-se' drive inflammatory immune response, and on the other hand inflammation can promote dysbiosis. The regulatory cytokine IL-10 together with TGF-B and IL-35 is a key mediator in microbe-derived gut homeostasis. Subsets of CD4 T cells such as Th1,Th2 and Th17 and Tregs play a crucial role in the pathogenesis of IBD. Recent advances in metagenomics, metabolomics, proteomics and computational analysis have furthered our knowledge about how dysbiosis can trigger inflammation and how targeted therapies can be formulated.

Standard treatment of IBD revolves around immune-suppressants which have variable response and are costly as well associated with significant toxicity. Restoring gut microbiome can be achieved by fecal microbial transplantation (FMT), antibiotics and pro- and pre-biotics. While FMT has shown encouraging results with changes in metabolites and restoration of gut microbiome, its use is still not standardized. Newer probiotics like live biotherapeutic products (LBPs) are being explored as the conventional probiotics had not lived up to their promise. Future treatment options in IBD being explored are genetic engineering to target specific pathobionts, modification of pathobionts by CRISPER-CAS editing and use of bacteriophages. As the microbial and immune response of each individual is unique, personalized approach to treat IBD is being contemplated with evaluation of both microbial and host profiling using metagenomics, metabolics etc so that customized therapy with LBPs and or immunomodulators can be planned.



The fundamental for intestinal fibrosis

Ren MAO (China)
The First Affiliated Hospital of Sun Yat-sen University

Associated Professor

Crohn's Disease (CD) is a chronic gut inflammation with increasing prevalence all over the world. Creeping fat (CrF), namely fat wrapping, is commonly considered as a unique hallmark of involved bowel segments in CD. Substantially, CrF is originated from mesenteric fat and resides around more than 50% of the involved bowels. Due to the contiguous anatomy location, intestine and mesentery can affect each other, and their interactions may play key roles in some conditions. Recent years, mesenteric fat has been attracting great attention on its pathogenesis in inflammatory bowel disease. It has been confirmed that mesenteric fat, instead of a simply morphological hallmark, was actively involved in CD. CrF is significantly associated with transmural inflammation, fibrosis and stricture of gut within CD. Furthermore, CrF is not only correlated with clinical activity of CD, but also helps predict post-surgical recurrence. These evidences indicate the potential of CrF as a promising therapeutic target in CD. Therefore, this lecture is going to focus on pathogentic effects of mesenteric fat on intestinal inflammation and fibrogenesis, as well as responses of mesenteric fat to intestinal inflammation and fibrosis. 1. Interaction between intestinal and MAT inflammation In CD, the mesentery is involved in the intestinal inflammation, and intestine is also conversely affected by the mesentery; the two interact. Mesentery can be implicated in CD in several aspects. It is widely accepted that destruction of the mucosal barrier occurs in the inflamed intestine and consequent migration of bacteria from the intestinal lumen to the mesentery. To cope with local inflammation and bacterial migration, the mesentery is activated and proliferates, which in turn results in secretion of a series of pro-inflammatory adipokines such as leptin, resistin, apelin, and the expression of membrane receptors. However, the secretion of adipokine metrnl, an anti-inflammatory factor, was also increased in the MAT of CD patients. The seemingly contradictory phenomenon suggests the complex role of adipokines derived from MAT. In addition, alterations in intracellular fatty acid metabolism in MAT, as well as macrophage composition shifting, are also influenced by intestinal inflammation. Multiple changes in the mesentery certainly affect intestinal inflammation in turn within CD. Adipokines from MAT exert their respective regulatory roles at each layer of intestine, including the effects on lymphatics. Additionally, the activation of immune responses in intestine aggravates intestinal inflammation, which may partially result from the interactions of mesenteric fat with intestine. 2. Interaction between intestine and MAT in fibrosis Intestinal fibrosis is attributed to chronic intestinal inflammation in CD, which currently is short of effective intervention and ultimately leads to bowel obstruction. It has been proposed that occurrence of creeping fat was highly associated with intestinal fibrostricture, which may provide a novel pathway for fibrosis prevention and treatment. Although heterogeneity of intestinal stricture has been recently identified as hypertrophic and constrictive strictures, both of them are commonly covered by creeping fat in subserosa, indicating high relevance between them. The cellular and molecular mechanisms of interactions between creeping fat and intestinal fibrosis have been being investigated these years. Activated intestinal muscular propria had been found to secrete fibronectin to induce creeping fat formation in intestinal fibrosis. Conversely, creeping fat could facilitate intestinal fibrosis and strictures through production of pro-fibrotic molecules, such as free fatty acids and possible Th2 cytokines. However, deficiency of appropriate animal model to recapitulate creeping fat and intestinal fibrosis limited revealing the interactions between them. Remarkably, a new animal model repeated colon biopsy was raised recently, which reproduced key pathological and transcriptomic features of creeping fat and fibrosis in CD. More evidences on interactions between creeping fat and fibrosis will occur along with identifying the mature animal model.

Virtual Room 2

Lunch Symposium (by Janssen) Biological therapies: from the initial to the future

BRICS IBD Consortium

Monitoring of anti-TNF antibody: when and how to handle

David RUBIN (USA)
University of Chicago Medicine

This presentation will review the management of IBD with anti-TNF therapy using a treat to target strategy. Clinical response may often fail to indicate signs of impending loss of response (LOR), making proactive monitoring of objective disease markers a critical aspect of disease management. Proactive therapeutic drug monitoring strategies include assessing genetic risk factors for LOR, early assessment of drug levels, and proactive dose optimization. Monitoring strategies should also consider dose de-escalation with close supervision, in the event therapy must be escalated or restarted.

Can histological healing be achieved in CD?

Jean-Frederic COLOMBEL (USA)
the Susan and Leonard Feinstein Inflammatory Bowel Disease Clinical Center

Histological healing has received less attention in Crohn's disease (CD) than in ulcerative colitis so far and is not currently considered as a target according to the STRIDE-II guidelines. One of the main reason is that there is no validated index to measure histologic activity in CD even though the "Global Histologic Activity Score" has been used in several studies. There is also a need for standardization of segments of the digestive tract and lesions to be sampled because of the patchiness of the CD. There is evidence in the literature that histological improvement and remission can be achieved with immunomodulators, anti-TNF therapy and more recently vedolizumab and ustekinumab. What remains controversial is whether histological healing is actually "desirable" in CD since the data showing better long term outcomes associated with histological healing than with endoscopic healing and/or clinical remission are inconsistent. Prospective studies are needed to validate histological improvement/healing in CD using a validated scoring system.

Virtual Room 2

Young Investigator & Education Forum
Evaluation and traditional intervention in IBD

BRICS IBD Consortium

Use of antidepressants in the treatment of depression with IBD

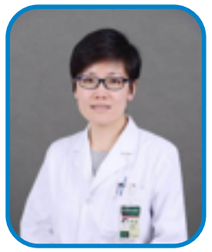
Gilaad KAPLAN (Canada)
University of Calgary

Depression is a common comorbidity facing individuals with IBD. Recent data suggests that depression may increase the risk of developing IBD and exacerbate the course of illness. Consequently, recognizing depression in those in IBD is of paramount importance. Treatment of depression may mitigate the impact of depression on IBD. Treatment of depression is multimodal including psychological counselling and anti-depressant medications. This talk provides a multi-faceted approach to managing depression in IBD that can be used by clinicians to improve the care of IBD.

Exploring endoscopic therapy for Crohn's disease strictureplasty

Yan ZHANG (China)
West China Hospital,Sichuan University

Stricture is one of the commonest complications in Crohn's disease (CD). The endoscopic therapy has emerged as a valid treatment option for CD strictures, providing a more effective approach than medical therapy while being less invasive than surgery. Endoscopic strictureplasty (ESTx) is a common endoscopic treatment modality for CD stricture, in which the stenostic lumen of the gastrointestinal tract is widened by incision and assessed by endoscopic clipping. ESTx provides a precision-cut in terms of location and depth, which reduces the risk of trauma to the anterior wall of the distal anorectum and anal sphincter when performed in the anorectum. Research reported ESTx appears to be more effective than endoscopic balloon dilation (EBD) for treating ileocolonic anastomotic strictures in CD patients, which avoids surgery and has a lower risk for perforation, but has a higher risk for delayed bleeding compared with EBD. Endoscopic metallic stents have been widely used for strictures of both benign and malignant conditions, however, the application of stent placement in CD stricture is very limited. Due to the high recurrence rate after EBD therapy, some researchers considered that stent may be useful since it could keep the dilation of the stenosis, which would be longer than the balloon theoretically. But the results were inconsistent in the researches about stent placement in CD stricture.The purpose of the lecture is to discuss the efficacy, short and long-term outcomes, complications, and safety of ESTx and stent in CD strictureplasty.



Benefit and complications for capsule endoscopy for IBD

Yue LI (China)
Peking Union Medical College Hospital

Benefit and complications for capsule endoscopy for IBD

Capsule endoscopy (CE) has revolutionized the imaging of the small bowel, visualizing the whole length of the small bowel noninvasively. The main indication for CE is the investigation of obscure gastrointestinal bleeding, but it has been increasingly used for assessing inflammatory bowel disease (IBD), especially small-bowel Crohn's disease (CD). There are indications of choosing CE for diagnosing and evaluating IBD: (1) to investigate patients when there is a high index of suspicion for CD, but esophagogastroduodenoscopy and ileocolonoscopy findings are normal; (2) to assess small bowel involvement extent or disease activity in patients with CD; (3) to assess pre-clinical postoperative recurrence of CD in the small bowel. Currently, CE is an attractive noninvasive method for detecting and diagnosing early small-bowel CD, assessing mucosal healing after treatment, and monitoring post-operative recurrence. Capsule retention, standard interpretation of CE images, as well as being unable to obtain tissue specimens and perform therapeutic procedures are main concerns when using CE in IBD.

Treatment of pediatric Crohn's disease: what should differ from adults

Ying HUANG (China)
Children's Hospital of Fudan University

Treatment of pediatric Crohn's disease: what should differ from adults

Pediatric inflammatory bowel disease (IBD) is a growing concern in pediatric health care. Approximately 20-25% of incident cases of IBD occur during childhood. Over the last decade, data from pediatric CD studies have demonstrated many similarities and differences between pediatric and adult onset. This report highlights evidence-based treatment strategy, with special focus on pediatric studies and care for children.Very-early-onset IBD (VEOIBD), defined as disease in children less than 6 years of age, has the greatest risk of monogenic cause of disease. There is no specific treatment for VEOIBD; however, our reports showed surgical therapy and thalidomide might be a bridge treatment for monogenic VEOIBD patients. We also demonstrated hematopoietic stem cell transplantation was effective in IL-10 receptor deficiency. Now exclusive enteral nutrition is recommended as first-line induction therapy, studies suggest it is more effective in achieving mucosal healing than steroids and superior to other therapies in growth improvement. Biologics clearly demonstrate efficacy in inducing and maintaining remissions in pediatric CD, and may be suggested as first-line therapy for those with high risk disease. And the combination therapy with an immunomodulator is also recommended. Given the few choices of biologics in children, the optimization of anti-TNF therapy is particularly crucial. Studies emphasize the importance of proactive TDM in children with CD treated with anti-TNF agents, particularly in view of pharmacokinetic data. As children age, transition to adult care for long-term follow-up should be planned carefully. Good transition of care promotes patient adherence to therapy and is crucial to developing lifelong care patterns. In conclusion, children with CD require special consideration. To achieve treatment goals of relieving symptoms, improving growth and quality of life while optimizing the drug and minimizing drug toxicity, more research is needed in pediatric IBD.

BEST ABSTRACT AWARD

BRICS IBD Consortium

BA01	Relapse rates after withdrawal of thiopurines in patients with inflammatory bowel disease
BA02	Excessive mitochondrial fission suppresses mucosal repair through impairing butyrate metabolism of colonocytes in UC
BA03	Small Intestinal Bacterial Overgrowth，A Predictor of Clinical Relapse in Patients with quiescent Crohn's Disease
BA04	Inflammatory Bowel Disease: Three Decadal Status and Trends from Global Burden of Disease Study 2019
BA05	Endoscopic and Histologic Response and Remission Rates in Ulcerative Colitis Patients Treated with Tofacitinib: Real-World Data from a Tertiary Center
BA06	Role of glucocorticosteroids dose escalation in the development steroid dependence and resistance in patients with ulcerative colitis

BEST ABSTRACT AWARDS

「BA01」

Relapse rates after withdrawal of thiopurines in patients with inflammatory bowel disease

Mukesh Kumar Ranjan [1], Sudheer Kumar Vuyyuru [1], Bhaskar Kante [1], Peeyush Kumar [1], Sandeep K Mundhra [1], Rithvik Golla [1], Raju Sharma [1], Peush Sahni [1], Prasenjit Das [1], Govind Makharia [1], Saurabh Kedia [1], Vineet Ahuja [1]

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[Background] Withdrawal of thiopurines after remission has been shown to be associated with increased risk of relapse in patients with inflammatory bowel disease. However, long term data on thiopurine withdrawal is limited especially from developing countries where cost of long-term therapy poses significant burden on patients.
[Methods] We retrospectively analyzed data of patients with IBD on thiopurine monotherapy who had stopped and were not on any other immunomodulator or biologics at the time of stopping thiopurines. All these were in clinical remission at the time of withdrawal.
[Results] Among 1264 patients of IBD who were treated with thiopurines, a total of 461 patients had to stop thiopurine because of various reasons. Among these, 218 (UC=179; CD=39) patients were in clinical remission and were continued on mesalamine. Overall, 36.7% (n=80) had relapse after a median duration of months 20months (IQR: 9-49). There is no difference in relapse rate between UC and CD (39.6% vs 23%). The overall cummulative probabilities of relpase were 17%, 34%, and 44% at the end of 1, 3, and 5 years respectively. Relapse rate was numerically lower in patients who had stopped azathioprine after at least 24months of therapy (31.9% vs 44.1%, p=0.051). On univariate cox regression analysis, female sex [(HR: 1.6 (1.0-2.6), p=0.02] and short duration of therapy with thiopurines [HR: 1.02 (1.01-1.02), p=0.004]before withdrawal were associated with increase risk of relapse.
[Conclusion] Approximately 1/3rd of patients relapse at 3 years and half at 5years following withdrawl of Thiopurines in patients with inflammatory bowel disease in clinical remission suggesting azathioprine monotherapy may be continued for longer duration.

「BA02」

Excessive mitochondrial fission suppresses mucosal repair through impairing butyrate metabolism of colonocytes in UC

Shichen Fu [1]

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[Background] Mitochondria of differentiated colonocytes metabolize butyrate to protect stem/progenitor cell, which is crucial for proliferation and wound healing. However, reduced metabolism of butyrate had been reported in UC patients, and its mechanism and effect remain unclear. We investigated the role mitochondrial fission plays in butyrate metabolism and mucosal healing in UC patients
[Methods] We initially measured the expression and phosphorylation of DRP1 in endoscopic biopsies of colonic mucosa from UC and controls. The butyrate exposure level of UC patients was assessed through measuring HDAC activity, H3K9/27 acetylation and Ki67 expression. We generated organoids from surgically resected human colon tissue and differentiate it into colonocytes for supernatant transfer experiments. Dextran sodium sulfate (DSS) induced colitis mice was used for in vivo verification.
[Results]1. Excessive mitochondrial fission was found in colonic epithelial cells of IBD patients 2. Increased exposure of the colonic stem/progenitor cell niche to butyrate was found in IBD 3. Excessive mitochondrial fission inhibits stem/progenitor cells proliferation through impairing butyrate metabolism in colonocytes 4. The expression level of butyrate consumption related molecules was not responsible for mitochondrial fission induced butyrate metabolism impairment 5. ACAT1 in mitochondria was decreased when excessive mitochondrial fission occurred 6. P110 promotes mucosal repair in a butyrate dependent manner in vivo
[Conclusion] Excessive mitochondrial fission in colonocytes may contributes to impaired butyrate consumption, thereby increasing butyrate exposure of colonic stem/progenitor cell niche, and further inhibiting the mucosal repair of UC. Thus, mitochondrial fission can be a new therapeutic target for promoting butyrate metabolism and mucosal repair in UC.

BEST ABSTRACT AWARDS

「BA03」

Small Intestinal Bacterial Overgrowth, A Predictor of Clinical Relapse in Patients with quiescent Crohn's Disease

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2. Department of Gastroenterology and Hepatology, General Hospital of Eastern Theater Command, PLA, Nanjing, 210002

[Background] To determine whether small intestinal bacterial overgrowth (SIBO) in individuals with quiescent Crohn's disease is associated with clinical relapse.
[Methods] This was a retrospective cohort study of all patients with quiescent CD and lactulose hydrogen-methane breath test (LHMBT), between October 2016 and June 2021. The variables collected were the presence of SIBO, smoking status, disease location, disease behavior, treatment, surgical history, and laboratory index. Patients were followed until the first relapse or by the end of the 18-months follow-up. The association between SIBO and the cumulative probability of clinical relapse during follow-up was tested combining Kaplan-Meier curves and log-rank testing.
[Results] Of the 73 patients enrolled, thirty-four (46.6%) patients were positive for SIBO. Twenty-seven (37.0%) suffered from relapse within 18 months (median time of relapse: 13.9 months). Patients who experienced a relapse showed a higher frequency of SIBO (17 [63.0%]versus 17 [37.0%] , P=0.032), penetrating disease behavior (4 [14.8%]versus 0 [0%] , P=0.031) than those who did not. Furthermore, the level of C-reactive protein, erythrocyte sedimentation rate, fecal calprotectin, IL-6, and albumin increased in patients who relapsed (P=0.0004, 0.001, 0.01, 0.0004, and 0.04), whereas hemoglobin decreased (P=0.048). Multivariate analysis revealed that SIBO (hazard ratio [HR]2.79, 95% CI: 1.20-6.51; P=0.017) and penetrating disease behavior (HR 3.66, 95% CI:1.06-12.63; P=0.040) were independent risk factors of relapse in patients with quiescent CD.
[Conclusion] SIBO was a predictor of clinical relapse in patients with quiescent CD. Proactive treatment for SIBO may provide extra benefit for patients with CD.

「BA04」

Inflammatory Bowel Disease: Three Decadal Status and Trends from Global Burden of Disease Study 2019

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[Background] Inflammatory Bowel Disease (IBD) is traditionally seen as a health problem of the developed nations. Of late, IBD has emerged as a serious concern for the rest of the world as well. Status and trends of disease-related burden provide valuable information for effectively handling various dimensions of disease management and carving out suitable policy measures. The present study investigates the global Burden of Disease (GBD) 2019 study database to summarize and critically investigate the global burden of IBD.
[Methods] Using Log-Linear growth models, we have presented trends for three decadal data (1990-2019) for age-standardized prevalence estimates, incidence estimates, disability adjusted life years (DALYs) and its components: years lived with disability (YLDs) and years of life lost (YLLs). We have also reported IBD related burden measures stratified

across 15 macrogeographic regions, Socio-Demographic Index (SDI) based quintiles, gender and age.
[Results] On crude basis, globally the prevalence rate of IBD increased from 62.09 in 1991 to 63.30 in 2019. Age standardized IBD related prevalence and burden measures have shown a significant downward trend over the period of study.There are negative compound annual growth rates of 0.656% and 1.035% for prevalence and burden of disease respectively over the study period.There is a wide variation in burden estimates and their growth rates across regions and SDI based quintiles.Although the contribution of premature mortality to the burden of disease has come down over last 30 years, yet in 2019 it contributed about 56.33% to the disability-adjusted life years. Incidence rate of IBD has fallen significantly in the age groups of more than 25 years but the same has remained stable for the age groups of less than 25 years. Australasia and Western Europe have high IBD prevalence and related disease burden, and contrary to global trends, these regions have exhibited significant positive growth trends.
[Conclusion] Overall significant declining trends have been observed in age-standardized IBD related burden measures. The findings highlight widespread variations in all IBD related burden measures across regions and SDI quintiles. Significant differences in prevalence and burden of disease are also observed across gender and age groups. For better management of IBD, there is a need for localized research and policy measures.

「BA05」

Endoscopic and Histologic Response and Remission Rates in Ulcerative Colitis Patients Treated with Tofacitinib: Real-World Data from a Tertiary Center

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1. University of Chicago Medicine, Chicago, 60637

[Background] There are few data detailing endoscopic and histologic response and remission with tofacitinib outside of the large phase III OCTAVE trials.
[Methods] This retrospective study includes consecutive patients with active UC who initiated tofacitinib at our center from 2014 to 2020. We reviewed demographic, clinical, endoscopic and histologic data. The Mayo endoscopic score (MES) was used to grade disease severity. Endoscopic response was defined as an improvement in MES of ≥ 1; endoscopic remission was defined as an MES of 0. Our GI pathologists assess the degree of inflammation in biopsies as normal, quiescent (no neutrophils), mild, moderate or severe. Histo-endoscopic mucosal healing was defined as endoscopic remission and histologic quiescence or normalization.
[Results] 91 patients with UC initiated tofacitinib. The mean age was 39.7 ± 14.2 with a mean age at disease onset of 28.8 ± 13.5. Demographics are described in Table 1. At week 12, among the 74 patients still on tofacitinib, 7 patients had colonoscopies; 1 patient was in endoscopic remission, 1 patient had endoscopic response, and all 7 patients still had active histologic inflammation, including the patient in endoscopic remission, who had severe histologic inflammation. At week 52, of 14 colonoscopies performed, 9 (64%) patients were in endoscopic remission and 5 of these patients had normal or quiescent histology. Complete endoscopic and histologic details are detailed in Table 2. Of all endoscopic and histologic data, 50% of patients with endoscopic remission had histologic normalization or quiescence. Histo-endoscopic mucosal healing occurred as early as week 24.
[Conclusion] Tofacitinib induced both endoscopic and histologic remission, often with the combined endpoint of histo-endoscopic mucosal healing. Although endoscopic improvement can be seen as early as at week 12, it is more prevalent after longer periods of treatment. This is the first study to describe histologic normalization with tofacitinib therapy.

「BA06」

Role of glucocorticosteroids dose escalation in the development steroid dependence and resistance in patients with ulcerative colitis

Irina Tishaeva [1], *Oleg Knyazev* [1, 2, 3], *Bella Nanaeva* [1], *Tatyana Baranova* [1], *Timofey Alexandrov* [1]

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2. Moscow Clinical Scientific Center named after A.S. Loginov, Moscow,
3. Research Institute of Healthcare Organization and Medical Management, Moscow,

[Background] Glucocorticosteroids (GCS) are widely used to induce remission of moderate and severe forms of ulcerative colitis (UC), but short-term and long-term side effects restrict their use as a maintenance therapy. Thus achieving of steroid-free remission is one of the main therapeutic goals. Aim. To establish the dependence of glucocorticosteroids dose escalation on the development steroid dependence resistance and outcomes of treatment in patients with ulcerative colitis.
[Methods] We retrospectively analyzed 191 patients with moderate and severe UC, who were treated with systemic corticosteroids. Males 99 (51,8%), females 92 (48,2%). The median age was 40,8±0,98 years. The average duration of the anamnesis was 7,3 years (Me 4 years). 75 (39,3%) patients were steroid-dependent, 45 (23,6%) – steroid-resistant. Patients were divided into three groups: 1-st group (n=75) – patients with steroid dependence, 2-nd group (n=45) - patients with steroid resistance, 3-rd (n=71) – patients, who received systemic GCS without development steroid dependence and resistance.
[Results] 87,4%, of patients had extensive colitis, 12,6% - left-sided colitis, without significant differences between the groups. Steroid-resistant patients significantly more often had an acute colitis compared to the first group (OR-43,73; 95% CI 5,51-353,15, $p<0.05$) and the third group ($p<0.05$). Dose escalation of GCS was significantly more frequent in the first group (OR-5.84; 95% CI-2.08-16.41, $p<0.05$) and in the second group (OR-9.65; 95% CI-3.26-28.54, $p<0.05$). The frequency of surgical treatment significantly prevailed in the second group compared to the first (OR-10.5; 95% CI 4.38-25.18, $p<0.05$) and the third (OR-21.67; 95% CI 7.65-61.36, $p<0.05$) groups.
[Conclusion] Dose escalation of GCS affects the development of steroid dependence and resistance in patients with ulcerative colitis and also increases the risk of surgical treatment in patients with steroid-resistant ulcerative colitis.

e-POSTER

BRICS IBD Consortium

e-POSTER

P021	Patients' views of shared decision making in IBD: An investigation in China
P022	Inflammatory response and fibrosis development can be modulated by activation of P2X7-receptor in murine DSS-induced chronic colitis
P023	SETD8 involved in the progression of IBD via epigenetically regulating P62/SQSTM1 expression
P024	Preliminary clinical analysis of argon ion coagulation and submucosal drug injection in the treatment of radioactive enteritis
P025	Risk factors and characteristics associated with nonalcoholic fatty liver disease in patients with ischemic colitis
P026	Carboxypeptidase A6 was identified and validated as a novel potential biomarker for predicting the occurrence of active ulcerative colitis
P027	Furin inhibits epithelial cell injury and alleviates experimental colitis by activating the Nrf2-Gpx4 signaling pathway
P028	Identification of microRNA-16-5p and microRNA-21-5p in feces as potential noninvasive biomarkers for inflammatory bowel disease
P029	No.80 Huanghe Avenue，Shijiazhuang City， Hebei Province， China
P030	Identification of pharmacological autophagy regulators of active ulcerative colitis
P031	A rare cause of intestinal ulceration：adult Hirschsprung's allied disease in Chinese
P032	Correlation between Magnetic Resonance Enterography and ileo-colonoscopy for assessment of disease activity in terminal ileal Crohn's disease
P033	Predictors of colectomy in patients with acute severe ulcerative colitis: single-center retrospective analysis
P034	Two Cases of Crohn's Disease under Infliximab combined with IgA Vasculitis
P035	Correlation Analysis between Coagulation Dysfunction and the Activity of Inflammatory Bowel Disease
P036	Analysis of Anxiety and Depression Status and Its Correlation with Inflammatory Cytokines in Patients with Inflammatory Bowel Disease
P037	Clinical Significance of Serum Antibody Detection in Patients with Inflammatory Bowel Disease
P038	Safety and Efficacy of Granulocyte and Monocyte Adsorption Apheresis in Patients With Ulcerative Colitis
P039	Influence of GMA on Serum Cytokines in Patients with Ulcerative Colitis
P040	Clinical Significance and Monitoring of Infliximab Trough Levels and Anti- Infliximab Antibodies in Patients with Inflammatory Bowel Disease

e-POSTER

P041	Treatment of moderate to severe ulcerative colitis by using granulocyte and monocyte adsorption apheresis(GMA) to evaluate its efficacy and safety–A report of 8 cases
P042	GMA vs. Infliximab for moderate to severe active ulcerative colitis: a retrospective observational study
P043	The Prevalence of Extraintestinal Manifestations in IBD
P044	Crohn's disease of the oesophagus: Case report and literature review
P045	A Retrospective Study for Evaluation of Inflammatory Activity in UC Patients， A Report of 30 Cases
P046	Clinical Significance of D-dimer， PT， FIB and PLT in Patients with Ulcerative Colitis
P047	Treatment of Inflammatory bowel disease Using Tumour Necrosis Factor Alpha Inhibitors (Infliximab) –A report of 28 cases
P048	Clinical Diagnostic Value of Perinuclear Anti-neutrophil Antibody and Anti-intestinal Goblet Cell Antibody in Ulcerative Colitis
P049	A Retrospective Analysis of 294 Patients with Ulcerative Colitis
P050	Therapeutic Effect of 5-ASA-loaded SiO2 Nanoparticles Targeting on Ulcerative Colitis in Mice
P051	Clinical study on Saccharomyces boulardii in the Treatment Of Patients with Mild to Moderate Ulcerative Colitis
P052	The Colonic Expression of Flt3 and Flt3L in The Mice Model of Ulcerative Colitis
P053	The protective role of AE-941（Neovastate）on ulcerative colitis in rats
P054	Cross-talk between gut microbiota and T cell balance in ulcerative colitis following fecal microbiota transplantation
P055	Enhanced Resistance to Infection in the Gut through the Bile Acid Metabolism of Lactobacillus reuteri
P056	Digital Spatial Profiling Reveals Functional Shift of Enterochromaffin Cell in Patients with Ulcerative Colitis
P057	Mitochondrial fission is involved in the early inflammation of UC
P058	High fat diet aggravates DSS-induced colitis by increasing LPL-regulated dendritic cell pro-inflammatory alteration
P059	MiR-204-5p regulates macrophage-mediated inflammatory response in ulcerative colitis
P060	MicroRNA-204-5p-mediated regulation of neuroplasticity contributes to visceral hypersensitivity in TNBS mice model

e-POSTER

P061	Nuak2 interacts with TGFβ and regulate glucose induced Treg differentiation
P062	identification of differentially expressed genes in patients with ulcerative colitis who lose to respond to infliximab treatment and prediction of potential therapeutic targets
P063	Serum Interleukin 38 Levels are Associated with Disease Severity and Lesion Location in Patients with Crohn's Disease
P064	Depression exacerbates dextran sulfate sodium-induced colitis via IRF5-mediated macrophage polarization toward the M1 phenotype
P065	Selective oxidative protection leads to tissue topological changes orchestrated by macrophage during ulcerative colitis
P066	Early Fecal Microbiome Transfer after donor defecation determines response in patients with moderate to severe ulcerative colitis
P067	GAS6 from CD200+ adipose-derived stem cells mitigates colonic inflammation via a macrophage-dependent manner
P068	Clinical significance of thrombocyte and other parameters in elderly Ulcerative Colitis
P069	UCC: A Novel Model Predicting Short-term Outcomes in Patients with Acute Severe Ulcerative Colitis
P070	Assessment Of Serum Cytokines And Clinical Features Predicts Endoscopic Score In Ulcerative Colitis Patients
P071	Fibrotic of Colonic Wall in Patients with Ulcerative Colitis underwent a colectomy
P072	The effectiveness and safety of cyclophosphamide for intestinal Behcet's disease
P073	The rural incidence and prevalence of ulcerative colitis in China
P074	Composition of mucous microbiota in ulcerative colitis depending on endoscopic activity
P075	Stringent screening strategy significantly reduces reactivation rate of tuberculosis in patients with inflammatory bowel disease on anti TNF therapy in a TB endemic region
P076	The function and mechanism of long non-coding RNA TNFRSF10A-AS1 in colorectal cancer
P077	Evaluation of Nutritional Status in Patients with IBD
P078	ITPA polymorphisms do not predict additional risk beyond TPMT and NUDT15 for thiopurine induced cytopenia in inflammatory bowel disease
P079	The role of Pelvic MRI-Based Score in Assessing the Severity and Follow-up of Patients With Crohn's Perianal Fistulas
P080	The role of Akkermansia muciniphila in protecting against Dextran Sulfate Sodium induced colitis

e-POSTER

P081	Serum procalcitonin as a prognostic marker in acute severe ulcerative colitis: A prospective study
P082	The efficacy and safety of anti-TNF agents in the treatment of Intestinal Behcet's disease□ a systematic review and meta-analysis
P083	Spicy food is the top one diet risk factor for the relapse and exacerbation of Inflammatory bowel disease
P084	Regulating effect of mitochondrial ribosomal protein S18B on inflammatory bowel disease by respiratory chain
P085	The intestinal parasitic infections in patients with inflammatory bowel disease
P086	Epstein–Barr Virus Contributing to the Differential Diagnosis of Primary Intestinal Epstein–Barr Virus-associated Lymphoproliferative Disorders and Crohn's Disease
P087	Azathiopurine-induced Leukopenia and Evaluation of Therapeutic Effects of Diyushengbai Tablet in Patients with Cohn's Disease
P088	Lactic Acid-Producing Probiotic Saccharomyces Cerevisiae Attenuates Ulcerative Colitis via Suppressing Macrophage Pyroptosis and Modulating Gut Microbiota
P089	The microbiome profile in ulcerative colitis and pouchitis
P090	Changes of medical treatment in inflammatory bowel disease: a single center study in 2010-2019 in China
P091	Medication Belief is associated with improved Adherence to Exclusive Enteral Nutrition in Patients with Crohn's Disease
P092	Development of a CT enterography index for evaluation of disease activity in patients with ileocolonic Crohn's disease
P093	Antibiotic-Modulated Microbiota Suppresses Colon Inflammation in Mice by Modulating the Intestinal Bile Acids Metabolism
P094	A Convolutional Neural Network-Based Endoscopic Images Diagnosis System Classifying Crohn's Disease and Ulcerative Colitis
P095	Distinct pattern of gut microbial dysbiosis in Crohn's Disease and intestinal tuberculosis – A Machine Learning-based classification model
P096	MyD88 inhibition-induced intestinal microbial imbalance stimulates inflammatory response via NOD-like receptor signaling pathway
P097	The Role of TNFAIP3 in the Pathogenesis of Intestinal Inflammation
P098	New observation on iron metabolism with liver iron concentration of Crohn's disease under magnetic resonance
P099	Dermatological lesions in patients with inflammatory bowel diseases on use of anti-tnf drug

e-POSTER

P100	Ustekinumab efficacy in Crohn's disease: results of a real-life evaluation in a specialized center in Brazil
P101	Clinicopathological spectrum of ulcerative colitis at a tertiary referral hospital in kwazulu-natal， south africa
P102	Efficacy of Faecal Microbiota Transplantation for Induction of Remission in Patients with active Ulcerative Colitis : Results from a series of 192 patients
P103	Clinical Profile of Elderly Onset Inflammatory Bowel Disease in a tertiary care center in north India
P104	Prevalence of Primary Sclerosing Cholangitis in Patients with IBD in a Tertiary Care Center in North India
P105	Clinical Profile of Pediatric Inflammatory Bowel Disease at a tertiary care center in north India
P106	Clinical， Biochemical And Molecular Predictors of Non-Response To Anti-TNF Therapy In Patients With IBD : A Pilot Study
P107	Fecal and Mucosal microbial and metabolomic profiles of patients with ulcerative colitis in response to FMT
P108	Early initiation of thiopurines does not change disease outcomes in patients with inflammatory bowel disease
P109	Similar risk of infection with SARS-CoV-2 in immunocompromised and immunocompetent patients with inflammatory bowel disease and healthy controls
P110	Validity and acceptability of dietary intake data with smartphone app (IBD NutriCare) in comparison with 24 hours diet recall method
P111	Minimal risk of lymphoma despite long term use of azathioprine in patients with inflammatory bowel disease: a longitudinal cohort analysis from Northern India
P112	Partial enteral nutrition in combination with exclusion diet is not superior to standard medical therapy in mild to moderate ulcerative colitis: A quasi-experimental study
P113	High prevalence of hepatic steatosis in patients with ulcerative colitis from North India
P114	Higher abundance of Firmicutes and lower abundance of Actinobacteria in donors is associated with better clinical response to Fecal microbiota transplantation in patients with mild-moderate ulcerative colitis
P115	Exclusive Enteral Nutrition refurbishes beneficial gut microbiota in patients with Acute Severe Ulcerative colitis
P116	Fecal microbiota transplantation in patients with mild to moderate ulcerative colitis is associated with early clinical response
P117	Establishment of a prediction model for reoperation risk of Crohn's disease and the impact of postoperative drug medications on reoperation rate

e-POSTER

P118	Trend and geographic variation in incidence and prevalence of inflammatory bowel disease in China: a nationwide employee study between 2013 and 2016
P119	A shortened diagnostic interval and its associated clinical factors and related outcomes in inflammatory bowel disease patients from a cohort study in China
P120	Proper diets might reduce the risk of inflammatory bowel disease: a propensity matching analysis of multicenter study in China

e-POSTER

「 P001 」

Influence of the nature of immunosuppressive therapy in patients with inflammatory bowel diseases on the level of immunoglobulins G after a New Coronavirus Infection

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[Background] Background Currently, there are differences in the results of international studies and treatment outcomes in patients with inflammatory bowel disease (IBD) and COVID-19. Further research is needed to help answer the questions: Do IBD patients have an increased risk of contracting SARS-CoV-2? Do IBD patients have more severe COVID-19 outcomes? Does IBD therapy increase the risk of infection? Do any IBD treatments protect against COVID-19? Objective: To study the effect of immunosuppressors, genetically engineered biologics, and janus kinase blockers on the level of SARS-CoV-2 class G immunoglobulins in IBD patients who underwent COVID-19.
[Methods] The level of SARS-CoV-2 class G immunoglobulins was analyzed in 66 patients with IBD after COVID-19 infection. Male 28 (42.4%) of women 38 (57.6 per cent). The median age was 39±4.2 years. The duration of the anamnesis ranged from 1 to 8 years (Iu 4 years). The patients were divided into two groups, depending on the therapy performed: Group 1 (n=31) received long-term (more than 1 year) immunosuppressants (azathioprine/6-mercaptopurine/tofacitinib), group 2 (n=35) received anti-TNF-α therapy. The level of SARS-CoV-2 class G immunoglobulins was determined by the immunochemiluminescence method.
[Results] After 4-6 weeks later, after a twice negative smear of PCR from the nose and oropharynx for SARS-CoV-2, in patients (n=31) receiving anti-relapse therapy with systemic IBD (azathioprine/6-mercaptopurine) and selective (tofacitinib) immunosuppressants, the average level of Ig G was 44.1±9.8 U/l. Among patients with IBD receiving anti-TNF-a drugs (n=35), the average level of class G immunoglobulins was 133.6±14.4 U/l. The difference was statistically significant (p=0.000003).
[Conclusion] The level of class G immunoglobulins 3-4 weeks after the COVID-19 infection was significantly higher in IBD patients who received anti-TNF-α drugs.

「 P002 」

The effectiveness of various regimens of ustekinumab maintenance therapy in patients with Crohn's disease with previous therapy anti-TNF with genetically engineered biological drugs.

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[Background] Ineffectiveness of therapy with the first anti-TNF-α drug, most often the patient is transferred to another TNF-α blocker. The patient does not always respond to therapy with the second TNF-α blocker. Unsatisfactory results of treatment with another genetically engineered biological drug depend on many factors. Objective: to compare the effectiveness of the standard and optimized regimen of ustekinumab therapy in patients with CD with previous therapy with genetically engineered biological drugs.
[Methods] 32 patients with CD in the form of ileocolitis with previous therapy with genetically engineered biological drugs were divided into 2 groups.

e-POSTER

The first group of patients aged 19 to 58 years (Iu-29) (n=16) received a standard regimen of maintenance therapy with ustekinumab (UST) every 12 weeks. The second group of patients aged 20 to 68 years (Iu-36) (n=16) received maintenance therapy by oral administration every 8 weeks. Monitoring was carried out according to the Crohn's disease activity index (CDAI), the level of C-RP, fecal calprotectin (FCP). A comparative assessment of the effectiveness was carried out after 6 and 12 months.
[Results] The average baseline indicators of CDAI in 1-st group 337.6±17.1 points, in 2-nd group 332.7±11.0 points (p=0.3). The average baseline values of C-RP in group 1 were 29.5±3.2 mg / l, in group 2-27.75±3.0 (p=0.73), the level of PCF in 1-st group 1019.4±97.2 mcg/g, in group 2-998.8±127.3 mcg/g (p=0.9). After 6 months, the average CDAI in -1st group - 133.2±28.3 points, in 2-nd group -120.8±15.5 points (p=0.2), the average C-RP level in 1-st group was 17.8±3.3 mg/l, in 2-nd group -9.5±1.9 mg/l (p=0.027). The level of FPC in the 1st group was 221.7±24.2 mcg/g, in the 2nd -198.0±22.1 mcg/g, (p=0.27). After 12 months, the average CDAI in the 1st group was 139.2±29.3 points, in the 2-nd - 140.6±16.5 points (p=0.21). After 12 months, in the 1st group of patients, the average level of C-RP was 19.2±3.5 mg/l, in the 2nd group -10.76±2.1 mg/l (p=0.039). The level of FPC in the 1-st group was 191.7±24.9 mcg/g, in the 2-nd-100.4±13.7 mcg/g (p=0.002).
[Conclusion] The anti-inflammatory efficacy of the optimized maintenance therapy regimen of ustekinumab every 8 weeks is higher than every 12 weeks in patients with Crohn's disease with previous therapy with genetically engineered biological drugs after 12 months of follow-up.

「 P003 」

The frequency of anxiety and depression in patients with inflammatory bowel diseases in the Moscow Clinical Scientific Center named after A. S. Loginov

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[Background] Anxiety and depression occur in a significant number of patients with inflammatory bowel diseases (IBD). The prevalence of anxiety and / or depression is 13-44.4% in patients with IBD compared to 4.4% among the world population Objective: to identify the frequency of anxiety and depression in patients with inflammatory bowel diseases in the Moscow Clinical Scientific Center named after A. S. Loginov.
[Methods] A questionnaire was conducted on the Hospital Anxiety and Depression Scale (HADS) questionnaire for 370 patients with moderate to severe UC during the period of exacerbation of the disease.
[Results] Of the 370 patients with UC, 283 (76.48%) had clinical and subclinical signs of anxiety and depression. Subclinical depression was noted in 76 (26.8%), clinically pronounced depression - 11 (3.4%), signs of anxiety had higher indicators-subclinical anxiety was found in 172 (60.8%) of the surveyed patients, pronounced clinical anxiety – in 24 (8.4%) patients with UC. Statistically significant correlations of average strength between the indicators of adherence according to the Morisky - Green questionnaire with scores on the HADS scale, both for anxiety and depression ($p<0.001$, r - 0.6299) were revealed Among patients with anxiety and depression, the ratio of patients with high adherence to therapy (HAT) and low adherence to therapy (LAT) was 204 (55,1%) 79 (21,4%), accordingly. When comparing the degree of adherence depending on the presence of anxiety and depression, we found that HAT was associated with anxiety and depression in patients with UC (OR= 0.024; 95% CI 0.003-0.186; $p<0.001$).
[Conclusion] The prevalence of anxiety and/or depression is 77% in patients with IBD during an exacerbation in the Moscow Clinical Scientific Center named after A. S. Loginov.

「 P004 」

Combined therapy anti-TNF and mesenchymal stromal cells promotes more pronounced healing of the intestinal mucosa in ulcerative colitis

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[Background] One of the new promising methods of treatment of ulcerative colitis (UC) is biological therapy with the use of mesenchymal stromal cells (MSCs) of the bone marrow. In a number of cases simultaneously with MSCs, patients receive concomitant anticytokine therapy. Currently, a new strategy for the treatment of UC is deep remission of the disease. Objective: to compare the level of immunobiological and histological markers of inflammation - C-reactive protein (CRP), the Geboes score (GS) and fecal calprotektin (FCP) - in patients with UC receiving cell therapy of MSC, anticytokine therapy with infliximab (IFX) and combination therapy MSCs of bone marrow and IFX.
[Methods] 67 patients with luminal form of UC in the form of colitis and ileocolitis of moderate severity were divided into groups depending on the therapy. The first group of patients aged 19 to 58 years (Me-29) (n=21) received anti-inflammatory therapy with a culture of MSC 2 million/kg according to the scheme, the second group of patients with UC (n=30) aged 23 to 60 years (Me-31) received IFX, the third group of patients with UC (n=16) aged 20 to 57 years (Me-33) received MSCs+IFX. The level of CRP, PCP and GS was evaluated at 26 weeks from the start of the therapy. The baseline CRP level was 24.0±1.9; 22.5±2.1 and 23.0±2.4 mg/l, respectively. The initial GS in the patient groups was 4.4±0.2; 4.35±0.2 and 4.6±0.3 points, respectively. The baseline FCP level was 804.8±88.8; 848.3±83.9 and 937.5±125.6 mcg/g, respectively.
[Results] After 26 weeks from the start of the therapy in the first group of patients, the level of C-RP was 9.8±1.1 mg/l, in the second group - 8.4±1.3 mg/l, in the third - 7.9±0.9 mg/l (p>0.05). After 26 weeks from the start of the therapy the level of FCP in the first group was 88.8 ± 5.3 mcg/g, in the second group - 90.6 ± 6.8 mcg/g, in the third group - 68,8 ±3,3 mcg/g (p <0,05 as compared with the 1-st and 2-nd groups). After 26 weeks from the start of the therapy the level of the GS in the first group was 0.7±0.1, in the second group - 0.66±0.1, in the third group - 0.5 ± 0,06 points (p<0.001 in comparison with the 1-st and 2-nd groups).
[Conclusion] Combined mesenchymal stromal cell and anti-TNF-therapy promotes more pronounced healing of the intestinal mucosa in UC.

「 P005 」

Steroid-free remission in patients with ulcerative colitis receiving tofacitinib in real clinical practice.

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[Background] Tofacitinib is a selective immunosuppressant, the first representative of the inhibitors of the janus kinase family, which has high selectivity against other kinases of the human genome. According to the results of the study, tofacitinib inhibits JAK-1, JAK-2, and in high concentrations – JAK-3 and tyrosine kinase-2. The drug is registered in Russia for the treatment of patients with ulcerative colitis. According to the OCTAVE Sustain study, steroid-free remission in patients with ulcerative colitis receiving tofacitinib at a dose of 10 and 20 mg per day is 27.7% and 27.6%, respectively. Objective: to identify the frequency of steroid-free remission in patients with ulcerative colitis receiving tofacitinib in real clinical practice.
[Methods] In the Department of Inflammatory Bowel Diseases of the Moscow Clinical Scientific and Practical Center named after A. S. Loginov, 58 patients with ulcerative colitis (UC) who received tofacitinib were observed. The effectiveness of therapy was evaluated (the value of the Mayo index less than 2, ESR, CRP, hemoglobin, fecal calprotectin (FCP) and the need for the appointment of glucocorticosteroids (GCS). The follow-up period was 12 months from the start of tofacitinib therapy.
[Results] During the follow-up period, out of 58 (100%) UC patients treated with tofacitinib, 9 (15.5%) patients did not respond to therapy. A prolonged induction course at a dose of 20 mg of tofacitinib was required in 14 (24.1%) patients who had previously received anti-TNF-α drugs. All patients at the time of initiation received GCS at an average therapeutic dose of 40 mg. After the induction course, corticosteroids were discontinued in 49 (100%) patients who responded to treatment. All patients achieved remission within 12 months of therapy (Meyo < 2). Repeated administration of corticosteroids for exacerbation or "eluding" of the response to tofacitinib was required in 11 of 49 (22.4%) patients.
[Conclusion] Steroid-free remission in patients with ulcerative colitis, receiving tofacitinib for 12 months, in real clinical practice is 77.6%.

「 P006 」

The relationship of histological remission with the duration of the anamnesis ulcerative colitis.

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[Background] The objectives of the treatment of patients with ulcerative colitis (UC) in accordance with the STRIDE-I provision, involves endoscopic healing of the colon mucosa. Histological remission is associated with endoscopic healing, which can be a predictor of long-term results. Biological and cellular therapy is most effective in the early stages of the disease. Objective: to assess the depth of histological remission with the duration of UC.
[Methods] The biopsy material of 75 patients with total or left-sided UC of moderate severity and severe severity aged from 22 to 56 years (average age 31±2.5 years), who were divided into groups depending on the therapy, was studied. The first group of patients with UC aged 22 to 51 years (Me-32) (n=29) received anti-inflammatory therapy using mesenchymal stromal cell culture (MSCs) 2 million/kg; the second group of patients with UC (n=27) aged 24 to 56 years (Me-38) received vedolizumab (VDB) according to the recommended scheme, the third group of patients with UC (n=19) aged 27 to 52 years (Me-31) received MSCs+VDB. The achievement of histological remission was assessed by the score of Geboes (SG).
[Results] In 1-st group, patients who achieved histological remission (SG<1) with a disease duration of more than 5 years - 2 (6.7%), less than 5 years - 8 (27.6%), did not achieve remission (SG >1) with a disease duration of more than 5 years - 14 (48.3%) patients, less than 5 years - 5 (17.2%) (95% CI 1.256 – 19.293; x2-7.635; p=0.006). In the 2nd group of patients who achieved histological remission (SG<1) with a disease duration of more than 5 years-2 (7.4%), less than 5 years - 8 (22.2%), did not achieve remission (SG >1) with a disease duration of more than 5 years - 15 (55.5%) patients, less than 5 years - 4 (14.9%) (95% CI 1.262 - 20.615; x2-7.026; p=0.009). In the 3-rd group of patients who achieved histological remission (SG<1) with a disease duration of more than 5 years-1 (5.3%), less than 5 years-7 (36.8%), did not achieve remission (SG >1) with a disease duration of more than 5 years - 4 (21.1%) patients, less than 5 years - 7 (36.8%) (95% CI 1.080 - 138.995; x2-4.968; p=0.026).
[Conclusion] A statistically significant majority of patients who achieved histological remission, regardless of the therapy, had a disease duration of less than 5 years.

e-POSTER

「 P007 」

Correlation of findings of colitis on CT compared to colonoscopy

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[Background] Introduction CT scanning is widely available and thus frequently used in the diagnostic work-up of abdominal complaints. Colonic wall thickening is often reported on CT scans and poses a dilemma to clinicians whether colonoscopy is required. Previous studies have shown that CT colonic wall thickening has a correlation of 69% with abnormal colonoscopic findings. We aimed to correlate CT findings of colitis with findings on colonoscopy.
[Methods] A retrospective review of all abdominal CT scans performed during 2019 was conducted. Those with "colitis" on their imaging were included. Analysis of demographics, endoscopy reports and folders was undertaken to assess correlation with endoscopy findings.
[Results] 69 patients had colitis / "colonic wall thickening" on CT scan. 51% were males, mean age was 46 years (SD±15.7). The median time interval between imaging and colonoscopy was 5 days (IQR=3-13). Primary indications for CT scan were abdominal pain (56.5%), diarrhoea (20.2%), looking for sepsis (11.5%) and rectal bleeding (2.9%). Most common sites of radiological disease were pancolitis (24.6%), recto-sigmoid (23.1%) and ascending colon (18.9%). 55% proceeded to colonoscopy, where colitis was noted in 63.1% of cases. The most common locations of endoscopic colitis were recto-sigmoid (41.3%) and a pancolitis (31%). There was no correlation between disease location radiologically and endoscopically (r=0.34, p=0.065). Similarly, there was no corelation between CT indication and endoscopic colitis (r=0.038, p=0.891) or time of colonoscopy (r=0.092, p=0.500). Overall 26% of the cohort had Inflammatory Bowel Disease.
[Conclusion] Endoscopists are often faced with the dilemma of whether to proceed with colonoscopy on patients with a radiological finding of colitis. This data showed no correlation between CT indication or findings with colonoscopic findings. Therefore, although this is a small study, the need for colonoscopy should be individualized.

「 P009 」

Clostridium butyricum-derived Extracellular Vesicles Fuel Regulatory Macrophages Reprogramming and Remodel the Gut microbiota to Prevent Ulcerative Colitis

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[Background] The extracellular vesicles (EVs) traffic constitutes an essential pathway of cellular communication. The molecules in EVs produced by procaryotes help in maintaining homeostasis, addressing microbial imbalance and infections, and regulating the immune system. Although Clostridium butyricum (C.butyricum) is commonly used for treating ulcerative colitis (UC), the potential role of C.butyricum-secreted EVs (CBEVs) in commensals-host crosstalk remains unclear.
[Methods] Here, we performed flow cytometry, western blot, immunohistochemistry and 16S rRNA analysis to explore the role of CBEVs on regulatory macrophage polarization in a dextran sulfate sodium (DSS)-induced UC mice model and the altered composition of the gut microbiome. Protein content in CBEVs were analyzed by proteomics, followed by functional annotation. Fecal transplantations and antibiotic treatment were used to further investigate the mechanisms by which CBEVs regulate macrophage balance.
[Results] Our findings showed that rich proteins in CBEVs involved in the modulation of inflammatory and immune pathways and that oral administration of CBEVs protected against colon shortening, inhibited infiltration of inflammatory cells, prevented epithelium damage and goblet cell loss in a mouse UC model. In terms of mechanism, CBEVs attenuated inflammatory response, maintained the balance between M1 macrophage cells and IL-10+CD163+regulatory macrophage cells in the inflamed colon by upregulating IL-4/STAT6 and autophagy signaling. Moreover, CBEVs partially restored gut dysbiosis and altered the relative abundance of Helicobacter, Escherichia-Shigella, Lactobacillus, Akkermansia and Bacteroides, which, in turn, fecal transplantations from CBEVs-treated mice also relieved the symptoms of UC and improved the impact of EVs on the activation of IL-4/STAT6 and autophagy signaling, with promotion of the regulatory macrophages differentiation.
[Conclusion]Our findings show that CBEVs could protect against DSS-induced colitis, in part by regulating the IL-4/STAT6- and autophagy-mediated polarization of regulatory macrophages and remodeling the gut microbiota, and thus suggest the potential efficacy of EVs of commensal Clostridium species against UC.

e-POSTER

「 P010 」

UCEIS is superior to MES and DUBLIN scores in evaluating the clinical prognosis of patients with ulcerative colitis

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[Background] The study aimed to evaluate the association of three endoscopic scoring systems with clinical severity and treatment outcomes of ulcerative colitis.
[Methods] Eighty-nine patients with ulcerative colitis and without history of intestinal resection were included in the study. Fifty-five patients completed a 2-year follow-up. The Ulcerative Colitis Endoscopic Index of Severity (UCEIS) scores, Mayo Endoscopic Score (MES) and Degree of Ulcerative colitis Burden of Luminal Inflammation (DUBLIN) scores were used to evaluate the severity of endoscopic lesions. The DUBLIN score was calculated as a product of the MES and disease extent. The clinical data was recorded as PMS, which comprised the patient-reported components of Mayo Score, and clinical remission was defined as PMS≤2. The treatment failure was defined as introduction/escalation of biologic agents, introduction of immunomodulators, use of steroids or surgery during follow-up.
[Results] When used to distinguish patients with moderate or severe clinical condition, the AUC of three scoring systems were similar (all p<0.05). But only UCEIS scores were associated with treatment failure (AUC=0.680, p=0.034). UCEIS score≥4.5 had the best sensitivity and specificity to distinguish patients with serious disease (sensitivity 70.5%, specificity 90.9%, AUC=0.846). When considering treatment escalation as the outcome, UCEIS≥5.5 had 52.9% sensitivity and 78.9% specificity. Therefore, a UCEIS score of 5 could be chosen as the most useful cut-off point between 'high' and 'low' inflammatory burden. UCEIS was correlated to CRP(r=0.427, p<0.05) and ESR(r=0.301, p<0.05) positively, but was correlated to serum albumin negatively(r=-0.487, p<0.05).
[Conclusion] UCEIS was correlated with objective inflammatory markers and was superior to MES and DUBLIN scores in predicting treatment escalation.

「 P011 」

One center experience in management of COVID-19 in Inflammatory Bowel Disease patient, Tatarstan Republic, Russia

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[Background] Management of inflammatory bowel disease (IBD) in patients with COVID-19 infection is challenging, given the novelty of infection, the lack of data on optimal disease treatment and unpredictable outcome. Aim of study was to evaluate the course of COVID-19 in IBD patients.
[Methods] 43 pts with definite diagnosis of IBD and COVID-19 (confirmed by a positive nasopharyngeal swab) were enrolled to the study. The patients were observed at the Infection Department of the Republican Clinical Hospital (Kazan, Russia) from April 2020 to February 2021. Clinical examination, laboratory and instrumental tests were performed to all patients, high-resolution computed tomography (HRCT) of the lungs was performed to 14 patients.
[Results] Among 43 pts with IBD 23 patients (53,5%) had ulcerative colitis (UC), 20 patients (46,5%) had

Crohn's disease (CD); 26 (60,1%) were male. The mean age of patients was 42,8±2,6 years. Among patients with UC 8 (34,8%) had proctitis, 6 (26,1%) – left-sided colitis, 9 (59,1%) – pancolitis. 10 (43,5%) patients with UC had remission, 13 (56,5%) – exacerbation in onset of COVID-19. Among patients with CD 5 (25%) had terminal ileitis, 7 (35%) – colitis, 8 (40%) – ileocolitis. 8 (40%) patients with CD had remission, 12 (60%) – exacerbation. 29 (67,4%) pts had mild-moderate course of COVID-19, 14 (32,6%) pts were admitted due to COVID-19 associated pneumonia: 8 (18,6%) – moderate, 5 (11,6%) – severe course. Among patients with pheumonia 7 (53,8%) pts had CT-1 stage; 3 (23,1%) – CT-2; 2 (15,4%) – CT-3; 1 (7,7%) – CT-4. COVID-19 treatment: all hospitalized patients were treated with dexamethasone, low-molecular-weight heparins, 1 – methylprednisolone, 4 – antibiotics for associated bacterial infection, 1 – hydroxychloroquine, 3 – IL-6 blockers (1 – olokizumab, 1 – levilimab, 1 – tocilizumab).
[Conclusion] COVID-19 in patients with IBD can lead to a wide range of clinical manifestations. Half of the patients with moderate-severe COVID-19 had symptoms of IBD. Treatment with IL-6 blockers in patients with IBD on biologics is possible.

「P012」

An effective method to identify clean resection margin and to help reduce postoperative endoscopic recurrence in ileocolic Crohn's disease

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[Background] Background : Microscopic inflammation at the resection margin was risk factor for early postoperative endoscopic recurrence of Crohns' disease (CD). Mesenteric creeping fat was highly correlated with disease severity. The aim of the study was to explore whether the extent of creeping fat could be used as an intra-operative marker to achieve clean resection margin and reduce the rate of endoscopic recurrence.
[Methods] Methods: We prospectively obtained 95 full-thickness cross-sectional pathological slides from 22 CD patients. Severity of the microscopic lesions at each layer of the intestine were examined. The extent of fat wrapping was calculated relative to the circumstance of the cross-sectional lumen(Fig 1A-L). We also established 2 retrospective cohorts from Jun 2014 to Apr 2020: the mesentery directed resection group of 63 localized ileocolic CD patients with the proximal resection margin reaching the normal extent of mesetery by observation and touching (Mes-D group), and the conventional resection group of 98 patients with the resection margin 2-5 cm proximal to the macroscopic bowel disease(Fig 1N,M). Modified Rutgeerts score and the REMIND score were used to evaluate endoscopic recurrence at the anastomosis (A) and neo-ileum (I) within 6 months and 12 months after surgery. Clinical recurrence (HBI>4) within 1 year was recorded.
[Results] Results: Microscopically, the circumferential extent of fat wrapping was highly correlated with the pathological score of chronic inflammation ($r=0.752$, $p<0.001$), fibrosis ($r=0.764$, $p<0.001$), muscular hyperplasia (pearson $r=0.827$, $p<0.001$) and neuronal hypertrophy ($r=0.657$, $p<0.001$) (Fig 2). The 6 and 12 months endoscopic recurrence (>i2a) for Mes-D and conventional group were 1.6% and 18.5% for 6 months ($p=0.04$), 2.7% and 23.0% for 12 months ($p=0.005$), respectively (Fig 3A). Endoscopic inflammation at neo-terminal ileum (I 2,3,4) were 1.6% vs 14.8% ($p=0.021$) at 6 months, and 0% vs 23.2% ($p<0.001$) at 12 months, for Mes-D and Conventional group, respectively, whereas the endoscopic inflammation at the Anastmosis site (A1,2,3) were similar between the 2 groups at 6 and 12 months (Fig 3C,D). Endoscopic recurrence-free survival, endoscopic progression-free survival and clinical recurrence free survival of the Mes-D group were superior than the conventional group(Fig 4A, B, C) . On the multivariable regression revealed that, smoking, Mes-D and postoperative biologics were the independent factors for postoperative endoscopic and neo-ileal recurrence at 6 and 12 months (Table1).
[Conclusion] Conclusions: The microscopic inflammation could be anticipated by the circumferential degree of creeping fat. Mesenteric directed resection could achieve lower postoperative endoscopic recurrence in ileocolic Crohn's disease.

「P013」

Astragalus polysaccharide modulates ferroptosis in a murine model of colitis and human Caco-2 cells via the NRF2/HO-1 pathway

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[Background] Ulcerative colitis (UC) is a relapsing and remitting inflammatory bowel disease (IBD), but current conventional drugs lack efficacy. Ferroptosis is a newly discovered form of regulated cell death (RCD) found to be involved in UC. Astragalus polysaccharide (APS) is an active ingredient of Astragalus membranaceus and has been shown to ameliorate experimental colitis. However, the effects of APS on IEC ferroptosis and colitis development remains unclear.To investigate how APS affects the ferroptosis of intestinal epithelial cells in dextran sulfate sodium (DSS)-induced experimental colitis in mice.
[Methods] C57/BL mice were randomly divided into the following 5 groups (n=5 each): control, DSS , DSS+APS (100 mg/kg), DSS+APS (200 mg/kg), and DSS+APS (300 mg/kg). The body weight, colon length, disease activity index (DAI) scores, H&E staining and the expression of cytokines (IFN-γ, IL-6, TNF-α, IL-1β, and IL-17A) were evaluated. In addition, the expression of ferroptosis-associated genes (PTGS2, FTH, and FTL), the levels of surrogate ferroptosis markers (MDA, GSH, and iron load), and the protein level of NRF2/HO-1 were measured in both DSS-challenged mice and RSL3-stimulated Caco-2 cells.
[Results] Our data showed that APS administration attenuated total weight loss, colon length shortening, DAI scores, histological damage, and the expression of inflammatory cytokines in the colon of DSS-challenged mice. Moreover, we observed that treatment with APS obviously inhibited ferroptosis in both DSS-challenged mice and RSL3-stimulated Caco-2 cells, as indicated by the decrease in the expression of ferroptosis-associated genes and the recovery change in the levels of surrogate ferroptosis markers. Mechanistically, the inhibitory effects of APS on ferroptosis were associated with the NRF2/HO-1 pathway.
[Conclusion] Collectively, our findings identify a new role of APS in modulating ferroptosis in a murine model of experimental colitis and human Caco-2 cells via the NRF2/HO-1 pathway.

「P014」

Typical esophageal ulcer may help the diagnosis of intestinal Behçet' s disease

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[Background] Behçet's disease (BD) is a chronic multi-systemic vasculitis that can be characterized by recurrent oral and genital aphthous ulcers, ocular disease and skin lesions. Accurately recognizing intestinal BD is critical as it could lead to life-threatening complications such as bleeding and perforation. However, due to the similarity between intestinal BD and Crohn's disease (CD) in terms of clinical manifestations, it is extremely difficult to distinguish between the two, especially when ulcers in the ileocecalregion is not typical. We would like to develop methods to effectively distinguish between

intestinal BD and CD in the presence of atypical intestinal ulcers.
[Methods] Since BD affects the entire digestive tract, we intend to evaluate symptoms of the upper digestive tract in intestinal BD patients in order to build consistent profiles and identify correlations.
[Results] Records of 7 patients with intestinal BD presenting as abdominal pain and diarrhea were collected. Among them, 3 had retrosternal pain or dysphagia while the other 4 showed no obvious upper digestive tract symptoms. But all of these 7 patients were found to have esophageal ulcers by gastroscopy without exception. Although the count of esophageal ulcers varied between patients, they all shared the same characteristics including round or oval shapes, well defined boundaries and sharp edges (as shown in the figure).
[Conclusion] This suggests gastroscopy assisted examination on typical esophageal ulcers could help better diagnose intestinal BD when it is not straightforward to distinguish between BD and CD with other symptoms.

「 P015 」

The depletion of psoas muscle mass as an indicator of activity in Crohn's disease

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[Background] Sarcopenia is a prevalent condition in patients with Crohn's disease (CD). CD-related sarcopenia usually coexists with malnutrition as results of chronic inflammation. Psoas muscle index (PMI) is widely known as an index for assessing nutritional status, and the impact of PMI on clinical performance is still poorly understood in CD. In the current study, we aimed to investigate whether the sarcopenia defined by PMI, is associated with CD disease severity, and behavior.
[Methods] CD patients who had abdominal computed tomography (CT) scans during hospitalization from June 2019 to May 2021 were retrospectively enrolled. We defined sarcopenia by PMI of the third lumbar vertebra (L3) by a CT examination using ImageJ software, <6.36 cm2/m2 for men and <3.92 cm2/m2 for women. CD activity index (CDAI), hemoglobin, serum albumin, and serum inflammatory indicators were also assessed. With respect to sarcopenia, disease severity and behavior were analyzed.
[Results] We enrolled 97 patients with CD aged 20 to 49 years old. Prevalence of sarcopenia was 41.2%, and independent of age, gender, behavior and location. Sarcopenia was related to disease activity. CDAI (P<0.001), C-reactive protein (CRP, P=0.024), Erythrocyte sedimentation rate (ESR, P = 0.006), were significantly higher in the patients with sarcopenia. PMI was significantly lower in patients with active compare to ones in remission (5.75±1.66 vs 7.19±1.81, P<0.001). ESR showed a tendency to decrease inversely with PMI (r =-0.367, P< 0.001), hemoglobin and albumin tended to increase in proportion to PMI (hemoglobin: r = 0.688, P<0.001; albumin: r = 0.427, P<0.001).
[Conclusion] CD patients with sarcopenia were related to more active disease. Identification of the depletion in psoas muscle mass can be used as a potential indicator of disease activity for CD patients.

「 P016 」

Prevalence and Factors Associated with Fatigue in Patients with Ulcerative Colitis

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[Background] To investigate the prevalence of fatigue in patients with UC and identify the factors associated with fatigue.
[Methods] A cross-sectional study was conducted in Affiliated Hospital of Nanjing University of Traditional Chinese Medicine. Collect the clinical data of patients, including demographic characteristics, disease characteristics and biochemical parameters. Fatigue was evaluated with the Fatigue Severity Scale (FSS). The Hospital Anxiety and Depression Scale (HADS), the Pittsburgh Sleep Index Scale (PSQI) and the Malnutrition Universal Screening Tool (MUST) were used to evaluate the anxiety, depression, sleep quality and nutritional risks of ulcerative colitis (UC) patients with fatigue.
[Results] A total of 220 UC patients were enrolled in this study. The prevalence of fatigue in patients with UC was 61.8%, of which in patients with disease activity was 68.23%, and in patients in remission was 40%. Single factor analysis showed that the Montreal classification, disease activity, the level of Hemoglobin, White Blood Cell, Lymphocytes, Erythrocyte sedimentation rate, C-reactive protein, and Fecal calprotectin were the factors associated with fatigue in Patients with UC. The variables associated with an increased risk of fatigue were: the Montreal classification (E2:E1, OR=5.009, 95%CI=1.061–23.654), disease activity (OR=5.686, 95%CI=1.340–24.127) and depression (OR=3.609, 95%CI=1.034-12.593).
[Conclusion] The prevalence of fatigue among UC patients is remarkably high. The Montreal classification, disease activity and depression are associated with an increased risk of fatigue. Fatigue is not associated with anxiety, sleep quality and nutritional risk.

「 P017 」

Tongue coating microbiota as a novel non-invasive biomarker in ulcerative colitis

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[Background] The microbial composition of the tongue coating is a crucial component of the human microbiome and also has an important role in diagnosing disease and evaluating its progression. This study was conducted to explore the tongue coating microbiota distribution in ulcerative colitis (UC) patients and to discover potential non-invasive biomarkers, with a goal to diagnose and prevent UC.
[Methods] 54 UC patients and 26 healthy individuals were recruited in this study and their intestinal and tongue coating microbiota distribution was evaluated by 16S rRNA sequencing. The correlation between tongue coating microbiota and clinical data were analyzed and the diagnostic usefulness of tongue coating microbiota was evaluated.
[Results] Compared with healthy individuals, the tongue coating microbiota in UC patients showed an increased abundance in the genera of Prevotella_6, Leptotrichia, Selenomonas_3, Rhodococcus (P < 0.05) and a decreased abundance in the genera of Erysipelotrichaceae_UCG-007 (P < 0.05). Compared with UC patients in remission, the tongue coating microbiota in patients with active UC showed a decreased abundance in the genera of Streptococcus, Lachnoanaerobaculum, Oribacterium, Catonella, Lactobacillus (P < 0.05) and an increased abundance in the genera of Filifactor, Granulicatella, Eubacterium_brachy_group, and Eubacterium_saphenum_group (P < 0.05). The distribution of Catonella in the tongue coating microbiota and the intestinal microbiota was similar, while the distribution of Streptococcus, Lachnoanaerobaculum, Oribacterium and Granulicatella was different. Oribacterium was positively correlated with body mass index and negatively correlated with erythrocyte sedimentation rate. In addition, Streptococcus and fecal calprotectin were negative correlated, while Filifactor and BMI were positively correlated.
[Conclusion] There were differences in tongue coating microbiota composition between UC patients and healthy individuals. Tongue coating microbiota were translocated to the intestines and their distribution was altered in the intestinal microbiota. Streptococcus, Lachnoanaerobaculum, Oribacterium, Catonella, Filifactor, and Granulicatella can be considered potential specific markers of active UC.

「 P018 」

Venlafaxine as an adjuvant therapy for IBD patients with anxious and depressive symptoms: a randomized placebo controlled trial

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[Background] Till now, the effect of antidepressant therapy on IBD still remains controversial. This trial aimed to assess whether adding venlafaxine to standard therapy improved the quality of life [QoL] , mental health and disease activity in IBD patients with anxious and depressive symptoms as compared to placebo.
[Methods] A prospective, randomized, double-blind, placebo-controlled clinical trial was conducted. Participants diagnosed with IBD with symptoms of anxiety/depression were randomly assigned to receive either venlafaxine 150 mg daily or equivalent placebo in addition to current standard medication and followed for 6 months. Inflammatory Bowel Disease Questionnaire (IBDQ) modified Mayo score, Crohn's disease activity index (CADI), Hospital Anxiety and Depression Scale (HADS) and blood examination were completed before the enrollment, during and after the follow-up. Mixed linear models were used to compare groups on the above outcomes both in IBD and subtypes including ulcerative colitis (UC) and Crohn's disease (CD). Univariate analyses were used to evaluate endoscopic scores, relapse rate, biologic and corticosteroid use rates in IBD population.
[Results] Forty-five IBD patients were included, of whom 25 were randomized to receive venlafaxine and 20 to placebo . The mean age was 39.76 (SD=11.30) years old. 25 (55.6%) was male. In IBD population, venlafaxine showed a significant improvement on QoL compared to the placebo group (at 3 months: p=0.005, 6 months: p<0.001). The venlafaxine group was also associated with a greater reduction in HADS at 3 months (anxiety: p<0.001, depression: p<0.001) and 6 months (anxiety: p<0.001, depression: p<0.001). Venlafaxine had no effect on IL-10 expression, endoscopic scores, disease course, relapse rate and use rate of biologics and corticosteroids (all p>0.05), but did reduce serum ESR (p=0.003), CRP (p<0.001) and TNF-α (0.009) levels at 6 months. On analysis of UC and CD separately, modified Mayo scores (p<0.01), IBDQ scores (p<0.001), HADS anxiety scores (p<0.001), HADS depression (p=0.007) scores, CRP (p=0.043) and TNF-α (p<0.001) were improved significantly by venlafaxine in UC at 6 months. Venlafaxine also had significant improvement in Crohn's disease activity index (CADI) (p=0.006), IBDQ scores (p=0.006), HADS anxiety scores (p<0.001), HADS depression scores (p<0.001), CRP (p=0.003) and ESR (p<0.001) at 6 months in CD subgroup.
[Conclusion] Venlafaxine has a significantly beneficial effect on QoL, IBD activity (measured by CDAI, modified Mayo scores, ESR, CRP, TNF-α) and mental health in IBD patients with comorbid anxious or depressive symptoms. However, venlafaxine did not appear to improve IL-10 level, relapses rate, endoscopic scores and use rate of steroids or biologics. (ID: ChiCTR1900021496.)

「 P019 」

Deletion of IL-6 Exacerbates Colitis and Induces Systemic Inflammation in IL-10-Deficient Mice

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[Background] Interleukin 6 [IL-6]or its receptor is currently a candidate for targeted biological therapy of inflammatory bowel disease [IBD] . Thus, a comprehensive understanding of the consequences of blocking IL-6 is imperative. We investigated this by evaluating the effects of IL-6 deletion on the spontaneous colitis of IL-10-deficient mice [IL-10−/−] .
[Methods]IL-6/IL-10 double-deficient mice [IL-6−/−/IL-10−/−]were generated and analysed for intestinal inflammation, general phenotypes and molecular/biochemical changes in the colonic mucosa compared with wild-type and IL-10−/− mice.
[Results]Unexpectedly, the IL-6−/−/IL-10−/− mice showed more pronounced gut inflammation and earlier disease onset than IL-10−/− mice, both locally [colon and small bowel]and systemically [splenomegaly, ulcerative dermatitis, leukocytosis, neutrophilia and monocytosis] . IL-6−/−/IL-10−/−mice exhibited elevations of multiple cytokines [IL-1β, IL-4, IL-12, TNFα]and chemokines [MCP-1and MIG] , but not IFN-γ [Th1] , IL-17A and IL-17G [Th17] , or IL-22 [Th22] . FOXP3 and TGF-β, two key factors for regulatory T [Treg]cell differentiation, were significantly down-regulated in the colonic mucosa, but not in the thymus or mesenteric lymph nodes, of IL-6−/−/IL-10−/− mice. CTLA-4 was diminished while iNOS was up-regulated in the colonic mucosa of IL-6−/−/IL-10−/− mice.
[Conclusion] In IL-10−/− mice, complete IL-6 blockade significantly aggravates gut inflammation, at least in part by suppressing Treg/CTLA-4 and promoting the IL-1β/Th2 pathway. In addition, the double mutant exhibits signs of severe systemic inflammation. Our data define a new function of IL-6 and suggest that caution should be exercised when targeting IL-6 in IBD patients, particularly those with defects in IL-10 signalling.

「 P020 」

Regulation of IL12B expression in human macrophages by TALEN-mediated epigenome editing

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[Background] Although the exact etiology of inflammatory bowel disease (IBD) remains unclear, exaggerated immune response in genetically predisposed individuals has been reported. Th1 and Th17 cells mediate IBD development. Macrophages produce IL-12 and IL-23 that share p40 subunit encoded by IL12B gene as heteromer partner to drive Th1 and Th17 differentiation. The available animal and human data strongly support the pathogenic role of IL-12/IL-23 in IBD development and suggest that blocking p40 might be the potential strategy for IBD treatment. Furthermore, aberrant alteration of some cytokines expression via epigenetic mechanisms is involved in pathogenesis of IBD.
[Methods] In this study, we analyzed core promoter region of IL12B gene and investigated whether IL12B expression could be regulated through targeted epigenetic modification with gene editing technology. Transcription activator-like effectors (TALEs) are widely used in the field of genome editing and can specifically target DNA sequence in the host genome. We synthesized the TALE DNA-binding domains that target the promoter of human IL12B gene and fused it with the functional catalytic domains of epigenetic enzymes.
[Results] Transient expression of these engineered enzymes demonstrated that the TALE-DNMT3A targeted the selected IL12B promoter region, induced loci-specific DNA methylation, and down-regulated IL-12B expression in various human cell lines.
[Conclusion]Collectively, our data suggested that epigenetic editing of IL12B through methylating DNA on its promoter might be developed as a potential therapeutic strategy for IBD treatment.

「 P021 」

Patients' views of shared decision making in IBD: An investigation in China

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[Background] Recently, decision-making process has become increasingly complex. But there is limited information on Chinese patients' views of shared decision making (SDM) in IBD. This questionnaire investigation aimed to understand Chinese patients' perspectives and expectations of SDM in IBD and analyze the possible factors that influence their views.
[Methods] An online survey was conducted from July 19th to 24th, 2020. A total of 1118 patients completed the survey.
[Results] One-third of patients were dissatisfied with

the current decision-making model, and the satisfaction of inpatients was lower than that of outpatients. 84% of patients preferred to participate in SDM, who were young and had a high education level, high income, commercial insurance, strong learning ability and knowledge of SDM. Most of those who did not want to participate (72%) were worried about the cost. The kind of medicine (948, 84.8%), surgical indications (505, 45.2%) and operation methods (482, 43.1%) were the topics that patients thought most require SDM. Side effects of medicine (837, 74.9%), costs of therapy (675, 60.4%), and surgical risks (563, 50.4%) were considered to be the most influential factors for SDM. 52.7% of all patients hoped experts in different disciplines would participate in SDM. The most desirable amount of time for discussion was 30 to 60 minutes (562/1118, 50.3%), that were associated with the cost of SDM.
[Conclusion] We can meet the needs of patients by reducing costs and strengthening online patient education and exploring a model suitable for Chinese IBD patients.

「P022」

Inflammatory response and fibrosis development can be modulated by activation of P2X7-receptor in murine DSS-induced chronic colitis

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[Background] A usual outcome of IBD is intestinal fibrosis, which can lead to complications such as stenosis and obstruction. ATP can act as a damage-associated pattern, and signal cellular stress by binding with purinergic receptors, such as P2X7-R. Previous works show that the P2X7-R blockade in experimental models attenuates intestinal inflammation. This study aims to investigate the role of the P2X7-R pathway in development of chronic inflammation and intestinal fibrosis.
[Methods] C57BL/6 wild-type (P2X7+/+) and P2X7-R genetic deficient (P2X7-/-) mice were subjected to chronic colitis by the cyclic administration of 2% Dextran Sodium Sulfate (DSS) in drinking water. Analyses included colonoscopy and endoluminal ultrasound (eUBM), histology, collagen staining, and immunohistochemistry. Cytokines were measured in colon homogenates. Colonic biopsies from IBD patients were obtained for colocalization of ubiquitous mesenchymal cell markers under confocal microscopy.
[Results] DSS-treated mice presented macroscopic changes compatible with inflammation, with a higher colonoscopic score in P2X7+/+ mice ($p< 0.01$). On eUBM, a lower variation on the cross-sectional area of the colon of P2X7+/+ mice was observed ($p = 0.005$). Histological score and collagen density were found to be higher in P2X7+/+ mice ($p< 0.01$). Activation of NFkB, NLRP3 and Caspase-1 pathways was lower in colon from P2X7-/- mice, as well as collagen concentration measured in colonic supernatant ($p< 0.05$). Pro-inflammatory cytokines such as IL-1b and IFN-g were lower in P2X7-/- mice ($p< 0.001$), as well as anti-inflammatory cytokines such as IL-10 and TGF-b ($p< 0.001$). Immunofluorescence of colon tissues from IBD-patients showed a higher density of P2X7+/a-SMA+ cells compared to control patients, more so in CD ($p< 0.01$).
[Conclusion] The P2X7-R is overexpressed in the colon of human IBD, and co-localizes predominantly with myofibroblasts. The experimental model appears to corroborate the role of P2X7-R in amplification of the inflammatory process and induction of a fibrotic response.

e-POSTER

「P023」

SETD8 involved in the progression of IBD via epigenetically regulating P62/SQSTM1 expression

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[Background]Epigenetic modification is an important part of the pathogenesis of inflammatory bowel disease (IBD). Some studies proved that p62 was involved in inflammatory response and upregulated in IBD patients, and histone modification plays an important role in regulating p62 expression. SETD8, a histone H4K20 methyltransferase, has been reported downregulated in some inflammatory diseases. Here, we investigated the role of SETD8 in the development of IBD and its underlying mechanisms.
[Methods] An inflammatory cell model was established to elucidate whether SETD8 involved in inflammatory response in macrophages. Three percent dextran sodium sulfate-induced colitis murine model injection with SETD8 inhibitor was used in our study to investigate whether SETD8 inhibition can affect the progress of IBD. The expression of SETD8 and p62 was measured by qRT-PCR and western blot. The mRNA level of inflammatory cytokines was analyzed by qRT-PCR. In addition, chromatin immunoprecipitation-PCR was performed to identify the mechanism by which SETD8 regulates p62.
[Results]SETD8 expression obviously decreased in vitro, in vivo models and in IBD patients. In lipopolysaccharide-activated RAW264.7 cells, knockdown of SETD8 significantly increased the mRNA expression of inducible nitric oxide synthase, cyclooxygenase-2, TNF-α, IL-6, IL-1β, and MCP-1. Based on the dataset, we verified that p62 was a target gene of SETD8 and chromatin immunoprecipitation-PCR assay identified that silence of SETD8 distinctly decreases the H4K20me1 enrichment in the promoter of p62. Moreover, silencing of p62 partly reverses the SETD8 inhibition-mediated pro-inflammatory effect in vitro. Finally, SETD8 pharmacological inhibitor (UNC0379) aggravated the disease progression in dextran sodium sulfate-induced murine colitis.
[Conclusion]Our findings elucidate an epigenetic mechanism by which SETD8 regulates the p62 expression and restrains the inflammatory response in colitis. Our result suggests that targeting SETD8 may be a promising therapy for IBD.

「P024」

Preliminary clinical analysis of argon ion coagulation and submucosal drug injection in the treatment of radioactive enteritis

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[Background] The clinical effect of endoscopic argon ion coagulation (APC) combined with submucosal adrenal saline injection in the treatment of radioactive enteritis, especially the efficacy evaluation of refractory radioactive enteritis, was initially discussed.
[Methods] Clinical data of 22 patients were reviewed and analyzed, with severity scored using modified endoscopic scoring (A) and Sherman's classification (B), respectively.The criteria for successful treatment are improvement in clinical symptoms or cessation of hematochezia (or only a small amount of hematochezia without further intervention).
[Results] All 22 patients achieved improved clinical symptoms after treatment, of which 18 (82%) hematochezia was completely stopped.A evaluation method: 15 mild enteritis (68%) and 7 severe enteritis (32%).B assessment: 9 mild (41%) and 13 severe (59%).Related analysis using A assessment revealed a good correlation of the number of treatments with endoscopic grade (or endoscopic score) ($r=0.86$, $P<0.001$).
[Conclusion] It is preliminarily proved that endoscopic APC combined with mucosal adrenal saline injection for radioactive enteritis is effective not only for mild-medium patients, but also can maintain long-term effect on refractory radioactive enteritis. The A evaluation method is more suitable for promotion in clinical practice.

e-POSTER

「 P025 」

Risk factors and characteristics associated with nonalcoholic fatty liver disease in patients with ischemic colitis.

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[Background] Ischemic colitis (IC) was investigated to be associated with dyslipidemia and subcutaneous adipose tissue. Nonalcoholic fatty liver disease (NAFLD) is associated with ischemic diseases such as coronary heart disease, ischemic stroke. But there is a paucity of data regarding the association between NAFLD and IC. NAFLD may be associated with the treatment and prognosis of IC. We investigated risk factors and characteristics associated with NAFLD in patients with IC.
[Methods]Patients with IC (NAFLD: 34 and controls: 81) from Zhongnan Hospital were investigated retrospectively from January 2012 to December 2018. Clinical data were compared by chi-square tests or independent samples T-tests. Binary logistic regressions and Kaplan-Meier analysis were performed to evaluate risk factors and prognosis, respectively.
[Results] NAFLD was diagnosed in 28.19% patients with IC. In the logistic regression analysis, hypertension [odds ratio (OR) 3.523; P = 0.019] , elevated alanine aminotransferase (ALT) (OR 6.278; P = 0.048), elevated triglyceride (OR 4.667; P = 0.003) and increased weight (OR 1.055; P = 0.039) were risk factors of NAFLD in patients with IC. Patients with NAFLD were more likely to require the vasodilators (P = 0.011) and get a relapse of IC (P = 0.011).
[Conclusion] NAFLD was found in 28.19% of patients with IC. Hypertension, increased weight, elevated ALT and triglyceride are independent predictors of NAFLD in patients with IC. NAFLD in patients with IC is associated with a greater probability of requiring for the vasodilators. NAFLD in IC and period of bowel rest are risk factors for the recurrence of IC.

「 P026 」

Carboxypeptidase A6 was identified and validated as a novel potential biomarker for predicting the occurrence of active ulcerative colitis

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[Background] changes in epithelial function and tissue damage. However, the pathogenesis is still unclear between active UC and inactive UC.
[Methods] Herein, weighted gene co-expression network analysis was applied to explore the gene modules related to active UC. Gene set enrichment analysis (GSEA) and gene set variation analysis (GSVA) were used to further investigate the underlying mechanism of selected genes.
[Results] We found that in the blue module (r = −.72), carboxypeptidase A6 (CPA6) was chosen to validate because of its high intra-modular connectivity and module membership. In the test sets, the expression level of CPA6 was down-regulated in active UC compared with inactive UC and normal colon. Furthermore, CPA6 expression was decreased primar- ily in the descending colon and only in mucosa affected by active UC. The receiver operating characteristic curve indicated that CPA6 expression had a performed well in diagnosing active UC from inactive UC (area under the curve = 0.99). Importantly, anti-tumour necrosis factor (TNF) treatment (infliximab and golimumab) significantly increased the CPA6 expression. Finally, GSEA and GSVA found that extracellular matrix receptor, inflammatory response and epithelial-mesenchymal transition were highly enriched in active UC with low CPA6 expression.
[Conclusion] CPA6 was identified and validated as a novel potential biomarker for predicting the occurrence of active UC, probably through regulating extracellular matrix or immune response.

e-POSTER

「 P027 」

Furin inhibits epithelial cell injury and alleviates experimental colitis by activating the Nrf2-Gpx4 signaling pathway

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[Background] Furin is a proprotein convertase reported to have protective effects in several autoimmune diseases. However, the role of furin in ulcerative colitis (UC) remains unclear. We aimed to clarify this role.
[Methods] Furin expression was measured in UC and dextran sulfate sodium (DSS)-induced colitis. Gain- and loss-of-function experiments were conducted to evaluate the effect of furin in UC using DSS-treated NCM460 cells. Several ferroptotic parameters, including cell viability, cell death rate, lipid reactive oxygen species level, mitochondrial membrane damage and glutathione peroxidase 4 (Gpx4) expression, were measured. Exogenous furin was used to treat the DSS-induced colitis in mice to confirm the results in vivo. Finally, the activation of nuclear factor erythroid 2-like 2 (Nrf2) was detected to explore the mechanism.
[Results] Furin expression was aberrant in UC. Furin overexpression attenuated DSS-induced ferroptosis-like injury and upregulated Gpx4 in NCM460 cells, whereas silencing furin had the opposite effects. Exogenous furin treatment alleviated DSS-induced colitis in mice by upregulating Gpx4. Mechanistic experiments revealed that furin activated Nrf2 both in vitro and in vivo.
[Conclusion] Furin protects epithelial cells from DSS-induced ferroptosis-like cell injury and alleviates experimental colitis by activating the Nrf2-Gpx4 signaling pathway.

「 P028 」

Identification of microRNA-16-5p and microRNA-21-5p in feces as potential noninvasive biomarkers for inflammatory bowel disease

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[Background] Inflammatory bowel disease (IBD) is a chronic idiopathic gastrointestinal disease. Increasing evidence suggests that microRNAs (miRNAs) may participate in the pathophysiology of IBD.
[Methods] A miRCURY™ LNA Array and in situ hybridization were employed to screen for differentially expressed miRNAs (DEMs) in fecal specimens from 41 IBD patients (22 ulcerative colitis (UC), 19 Crohn's disease (CD)) and 23 healthy controls (HC). RT-qPCR was performed to confirm the findings. The DEMs target genes and corresponding biological functions were predicted by bioinformatics analysis.
[Results]Compared with HC, miR-16-5p in the feces was up-regulated both in UC and CD patients ($p < 0.01$), while miR-21-5p was up-regulated only in UC patients ($p < 0.01$). TargetScan 7.2, miRWalk, and miRDB were used to predict 216 public target genes of miR-16-5p and miR-21-5p, and six hub genes (PIK3R1, GRB2, SUZ12, NTRK2, Smurf2, and WWP1) were analyzed using the STRING database and Cytoscape. All the hub genes promote the occurrence and development of IBD-related colorectal cancer.
[Conclusion] The elevated levels of miR-16-5p and miR-21-5p in feces of IBD patients have to guide significance for the noninvasive clinical diagnosis of IBD and have a warning effect on the occurrence of IBD-related colorectal cancer.

e-POSTER

「 P029 」

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[Background] With the development of society, the incidence of ulcerative colitis (UC) has been increasing year by year, and several studies have found that the clinical manifestations and regression of female UC patients are better than those of male, but the specific pathological mechanisms are not yet clear. Hepcidin, an iron-associated regulatory protein that binds to and degrades cell membrane iron transport proteins, can act directly on intestinal mucosal epithelial cells to limit their iron transfer and release, thus forming an iron-restricted environment in the local mucosa to antagonize harmful bacteria and play a role in regulating flora and immunity. Notably, Hepcidin expression was also significantly gender-specific, with significantly higher expression levels in females than in males when stimulated by abnormal factors such as inflammation. Therefore, assessing the mucosal Hepcidin expression levels in UC patients of different genders in China may provide new ideas for studying the specific mechanisms of the phenomenon of gender differences in UC patients.
[Methods] Objective: In order to analyze the clinical manifestations and laboratory findings of UC patients of different genders in our hospital, compare the expression of intestinal mucosal Hepcidin in UC patients of different genders, and explore the relationship between gender differences and mucosal Hepcidin in UC patients. Methods: We retrospectively analyzed the clinical data of UC patients who met the inclusion criteria in the Department of Gastroenterology, East Campus of the Second Hospital of Hebei Medical University between January 2018 and December 2020, and analyzed the demographic characteristics, clinical characteristics, laboratory tests and clinical regression of UC patients of different genders; the above-mentioned patients who had undergone e-colonoscopy between August 2020 and December 2020 were collected. The mucosal tissue specimens of patients who had undergone e-colonoscopy between August 2020 and December 2020 were collected, and the expression levels of Hepcidin in the intestinal mucosa were detected by semi-quantitative IHC and mRNA expression levels were quantified by Real-time PCR.
[Results] This study retrospectively analyzed 271 eligible UC patients with ulcerative colitis, including 138 (50.92%) males and 133 (49.08%) females; 52 colonic mucosal tissue specimens were collected from the above study subjects who had undergone e-colonoscopy between August 2020 and December 2020, including 25 (48.07%) males and 27 cases (51.92%). 1. The leukocyte count (8.81 vs 7.10, $P<0.05$) and ultrasensitive C-reactive protein (43.45 vs 28.65, $P<0.05$) were significantly lower in female patients with overall and severe UC than in male patients, and the length of hospital stay was less than in male patients (25.0 vs 21.0, $P<0.05$), suggesting that the degree of inflammation and regression of the disease were better in female patients with severe UC. The length of hospitalization was less than that of men (25.0 vs. 21.0, $P<0.05$), suggesting that the degree of disease inflammation and regression were better in men. 2. Mucosal Hepcidin was mainly expressed in the luminal side intestinal epithelial cells, and Hepcidin expression was significantly upregulated in the UC group compared with the control group ($P<0.05$), and the increase was greater in the female UC group ($P<0.05$), and there were gender differences between men and women. 3. Hepcidin expression was significantly higher in women in remission ($P<0.05$) among different disease stages, while there was no significant difference between remission and active stages in men. 4. Analysis of mucosal Hepcidin levels in male and female patients at different levels of severity showed that there was a gender difference between males and females in the endoscopic Mayo score 1 subgroup ($p<0.05$), while there was no gender difference in both 2 and 3 scores. 5. Gender differences ($P<0.05$) were still observed between genders in the 5-ASA analog treatment group, whereas no significant gender differences were observed in the hormone and infliximab treatment groups, suggesting that immune-related treatment may have some effect on mucosal Hepcidin expression.
[Conclusion] In clinical UC patients, the overall disease regression was better in women than in men; this phenomenon at the mechanistic level may be related to the sex differential expression of Hepcidin in the intestinal mucosa with protective properties.

e-POSTER

「 P030 」

Identification of pharmacological autophagy regulators of active ulcerative colitis

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[Background] Ulcerative colitis (UC) is a chronic recurrent disease of unknown etiology. Recently, it has been reported that autophagy-related gene polymorphism is closely associated with increased risk of UC, and the therapeutic effect of some UC drugs is mediated by regulating autophagy pathways. This study aims to identify pivotal autophagy-related regulators in UC pathogenesis.
[Methods] Gene expression profiles and clinical information of active UC patients were obtained from GEO databases. CIBERSORT was adopted to evaluate the immune cell infiltration. We used weighted gene co-expression network analysis (WGCNA) and differential expression analysis to identify the pivotal modules and genes associated with active UC. Subsequently, we conducted validation in the testing set and explored its relationship with commonly used UC therapeutics.
[Results] The training set included 36 healthy controls and 46 active UC patients. There were 423 differentially expressed genes (DEGs) found, which enriched in autophagy-related pathways. The infiltration of inflammatory cells in the intestinal mucosa of active UC increased. WGCNA indicated that the turquoise and blue modules were the critical modules. CASP1, SERPINA1, and CCL2 have been identified as the hub autophagy-related genes of active UC, after combining DEGs and 232 autophagy-related genes from HADb with the genes of turquoise and blue modules, respectively. We further verified that CASP1, SERPINA1, and CCL2 were positively associated with active UC and served as an autophagy-related biomarker for active UC. Moreover, increased SERPINA1 in the involved intestinal mucosa was reduced in patients with active UC who responded to golimumab or glucocorticoid therapy. But, neither CASP1, SERPINA1, and CCL2 were changed by treatment of 5-aminosalicylic acid (5-ASA) and azathioprine.
[Conclusion] CASP1, SERPINA1, and CCL2 are autophagy-related hub genes of active UC. SERPINA1 may serve as new pharmacological autophagy regulators of UC, which provides new targets for the use of small molecules targeting autophagy in the treatment of active UC.

「 P031 」

A rare cause of intestinal ulceration: adult Hirschsprung's allied disease in Chinese

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[Background] The intestinal ulcers that occur with adult Hirschsprung's allied disease are easily confused with inflammatory bowel disease,to investigate the diagnosis and treatment of chinese patients with adult Hirschsprung's allied disease (AHAD) , to improve the understanding of the disease and reduce the misdiagnosis rate
[Methods] 84 cases of Chinese AHAD retrieved from Pubmed database and Chinese literature database from 1984 to 2020 and the clinical data of 3 patients who were treated in our hospital were analyzed retrospectively.
[Results] he main symptoms of 87 patients were chronic constipation, abdominal pain , abdominal distension, and most of them had been reported by chinese hospitals with acute intestinal obstruction. Among them, 86 patients underwent surgical treatment, one patient died of acute intestinal perforation before the operation, and all Surgical patients had no intraoperative and postoperative death. During the follow-up period of 1-3 years, 73 patients remained in remission
[Conclusion] The possibility of AHAD should be considered in patients with chronic constipation complicated and acute intestinal obstruction。 Eventually, all patients with AHAD need surgical treatment. The key to success is the extent of the

surgical removal of the lesion. A rapid pathological section during operation can not only help to diagnose but also judge whether the distal intestinal wall ganglion is typical, it is helpful to evaluate the extent of the diseased intestinal segment, as a guide for the scope of surgical resection.

「P032」

Correlation between Magnetic Resonance Enterography and ileo-colonoscopy for assessment of disease activity in terminal ileal Crohn's disease

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[Background] Magnetic resonance enterography (MRE) has emerged as a novel tool for assessment of disease activity in Crohn's disease (CD). Real world data on performance of MRE in terminal ileal CD are lacking.
[Methods] Retrospective analysis of patients with terminal ileal CD who underwent both ileo-colonoscopy and MRE was performed. Ileo-colonoscopy was considered as gold standard for assessment of disease activity. On ileo-colonoscopy, a simple endoscopic score for Crohn's disease (SES-CD) ≥2 was considered as active disease; presence of ulcers indicated severe disease. MRE scoring of the disease activity was performed using magnetic resonance index of activity(MARIA) and simplified MARIA(MARIAs). The measure of agreement between ileo-colonoscopy and MRE, comparison of MARIA and MARIAs for assessment of disease activity and sensitivity of MRE to detect mucosal ulcerations were calculated.
[Results] Seventy patients with terminal ileal CD [mean age 40.74±15.56 years; 71.4% males(n=50)] were evaluated. The sensitivities of MARIA and MARIAs scores to detect active disease were 0.76 and 0.84 respectively. The AUROC for detecting severe disease was 0.836(p<0.0001) for MARIA and 0.861(p<0.0001) for MARIAs. For mild active disease, there was no agreement between SES-CD and MARIA or MARIAs, however for severe disease, the agreement was fair and moderate for MARIA and MARIAs respectively. MARIA and MARIAs were comparable for identification of active and severe disease (κ 0.759, p<0.0001 and κ 0.840, p<0.0001 respectively). MRE was 68.18% sensitive to detect mucosal ulcers.
[Conclusion] MRE is a reliable and sensitive tool for detection of endoscopically severe, but not mild, terminal ileal CD.

「P033」

Predictors of colectomy in patients with acute severe ulcerative colitis: single-center retrospective analysis

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[Background] Acute severe ulcerative colitis is observed in 25% of patients. Near 40% of this severe patients might undergo surgery and the mortality rate in this group of patients reaches 6.3%. Untimely surgery leads to severe metabolic disorders, infectious postoperative complications, and increases the risk of death. Eventually, the purpose of this study is identify predictors of colectomy in patients with acute severe ulcerative colitis.
[Methods] A retrospective study included 74 patients with acute severe ulcerative colitis, who were treated at the clinic in 2017. The patients were divided into the groups: group of colectomy - 54/74 (73%) and group of conservative treatment 20/74 (27%). The predictors, like serum albumin, C-reactive protein, hemoglobin, endoscopic picture of «extensive ulcers», and clinical data were analyzed. The statistical analysis was performed using the software«Statistica 13.3» and «RStatistica».
[Results] There were no difference by gender, age and duration of the disease in the groups. Mean of albumin and hemoglobin levels were significantly lower in the colectomy group (Table 1). The endoscopy «extensive ulcers» was significantly more common in the operated patients. Also univariate, multivariate and ROC analyses were performed (Table 2). The risk of colectomy when endoscopy «extensive ulcers» combined with an albumin level<31 g/l and hemoglobin<107 g/l, was 100%. A nomogram for predicting the probability of colectomy was constructed (Figure). This logistic model has a statistically significantly high predictive value (AUC=0.93, p=0.006).
[Conclusion] The endoscopic picture of «extensive ulcers» in combination with an albumin level of less than 31 g/l and hemoglobin less than 107 g/l are predictors of colectomy with high predictive value. These results were used for creating design of prospective study (ClinicalTrials.gov Identifier: NCT03947931).

「P034」

Two Cases of Crohn's Disease under Infliximab combined with IgA Vasculitis

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[Background] There are some cases of CD complicated with IgAV at present.
[Methods] This article reports two rare Crohn's disease（CD）under Infliximab combined with IgA Vasculitis（IgAV).
[Results]The clinical characteristics、treatment and pathogenesis of CD combined with IgAV were discussed in details.
[Conclusion] Exploring the association between the two illnesses is conducive to individualized treatment and improve the prognosis of patients.

P035

Correlation Analysis between Coagulation Dysfunction and the Activity of Inflammatory Bowel Disease

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[Background] To analyze the changes of coagulation parameters in the occurrence and development of disease in hospitalized patients with inflammatory bowel disease (IBD) so as to explore whether or not there is a blood hyper-coagulation state and its relationship with intestinal inflammation in patients with IBD, and to provide evidence for coagulation parameters as disease severity predictors and for preventive anticoagulant therapy.
[Methods] 141 patients with IBD hospitalized from January 2016 to December 2018 in the First Affiliated Hospital of Dalian Medical University were selected as IBD group, which was further divided into UC group (97 cases) and CD group (44 cases). According to Mayo score, the UC group was divided into the remission group (12 cases), the mild group (20 cases), the moderate group (36 cases) and the severe group (29 cases). According to the Best CDAI, the CD group was divided into the remission group (10 cases), the mild group (10 cases), the moderate group (15 cases) and the severe group (9 cases). The diagnosis of UC and CD was based on the"Consensus on the diagnosis and treatment of inflammatory bowel disease" in guangzhou in 2012" . 60 healthy persons undergoing well-being check at the First Affiliated Hospital of XXXX University as the control group. Differences in coagulation parameters between the IBD group and the control group, UC group and the CD group and among remission, mild, moderate, and severe group were c ompared. These coagulation parameters include platelet (PLT), mean platelet volume (MPV), prothrombin time (PT), and activated partial thromboplastin time (APTT), prothrombin activity (PTA), thrombin time (TT), fibrinogen (FIB), D-dimer (DDI), and international standard ratio (INR). Correlation analysis between the above coagulation parameters and disease activity index, erythrocyte sedimentation rate (ESR)

and high-sensitivity C-reactive protein (CRP) were also carried out. Statistical analysis was performed using statistical software SPSS 23.0. Correlation analysis was performed using Pearson correlation analysis. All measurement data were expressed as mean ± standard deviation or median. Measurement data in accordance with normal distribution were compared by t test. Comparison between groups was analyzed by one-way analysis of variance. The non-normal distribution measurement data is tested by rank sum; the count data is analyzed by chi-square test. P < 0.05 was considered statistically significant.
[Results] 1. In IBD group, PLT, DDI, INR and FIB were significantly higher than that in control group (P<0.01). MPV, TT and PTA were significantly lower than that in the control group (P<0.01). PT and APTT difference was not statistically significant. In UC group and CD group, PLT, MPV, FIB, DDI and PTA were significantly statistically significant than that in the control group (P<0.01). In addition, in UC group, TT was significantly lower than that in the control group (P<0.01). In CD group, PT and INR were significantly higher than those in the control group (P<0.01), but TT was significantly lower than that in the control group (P<0.05). 2. DDI in UC group was higher than that in CD group (P<0.05), PT in CD group was higher than that in UC group (P<0.05), and INR was significantly higher than that in UC group (P<0.01). The remaining coagulation parameters had no statistical significance between the two groups. 3. In UC group, PLT, DDI and FIB in severe group were significantly higher than those in remission group, mild group and moderate group (P all<0.01), MPV and PTA were significantly lower than those in remission group, mild group and moderate group (P all<0.01),while PT was only higher than that in mild group and remission group (P<0.05). But the difference in APTT among these subgroups was not statistically significant(P>0.05). Among CD subgroups, PLT and FIB in severe group were significantly higher and MPV was lower than those in remission group, mild group and moderate group (P<0.01), while PT was only significantly higher than that in the remission group (P<0.01), and DDI was higher than that in remission group and mild group (P<0.05), and PTA was lower than that in the remission group (P<0.05). 4. Correlation analysis showed that PLT, PT, DDI, FIB and INR were positively correlated with modified Mayo score, ESR and CRP in UC group (P<0.01), but MPV and PTA were negatively correlated with modified Mayo score, ESR and CRP. (P<0.01). Furthermore, TT was negatively correlated with CRP (P<0.05). In CD group, FIB PLT, and DDI were positively correlated with CDAI, ESR and CRP (P<0.01, P<0.05), and PT was positively correlated with CDAI and CRP (P<0.05). MPV and PTA were negatively correlated with CDAI score, ESR and CRP(P<0.01), while TT was negatively correlated with ESR and CRP (P<0.05).
[Conclusion] 1. Hypercoagulation state exists in patients with IBD. 2. Patients with IBD exhibit abnormal PLT, FIB, DDI, PT and PTA levels which are correlated with disease activity index, ESR and CRP. These coagulation parameters can be used as indicators to evaluate the degree of disease activity and to provide a theoretical basis for preventive anticoagulant therapy.

⌈ P036 ⌋

Analysis of Anxiety and Depression Status and Its Correlation with Inflammatory Cytokines in Patients with Inflammatory Bowel Disease

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[Background] To investigate the status of anxiety and depression in patients with inflammatory bowel disease (IBD) and its correlation with inflammatory cytokines, and analyze the risk factors associated with anxiety and depression in IBD patients, so as to explore their clinical significance.
[Methods] According to inclusion criteria, 81 patients with IBD hospitalized in the department of gastroenterology of The First Affiliated Hospital of Dalian Medical University from July 2017 to January 2019 were enrolled in this study, who were further divided into UC group (61 cases) and CD group (20 cases). According to the modified Mayo score, the UC group was divided into remission group (5 cases), mild group (14 cases), moderate group (33 cases), and severe group (9 cases). According to the simplified CDAI score, the CD group was divided into remission group (5 cases), mild group (4 cases), moderate group (6 cases), and severe group (5 cases). The Hamilton Anxiety Scale (HAMA) and Hamilton Depression Scale (HAMD) were respectively used to evaluate the anxiety and depression status of IBD patients. The levels of serum inflammatory cytokines (IL-6, IL-8, IL-10, IL-1β,TNF-a) and the information of duration of illness, gender, age, marital status, educational background, job status, availability of medical insuran ce, monthly income were collected by consulting electronic medical records or questionnaires. To analyze the correlation between anxiety, depression and the severity of IBD, the correlation between the level of anxiety and depression and the levels of serum inflammatory cytokines, as well as the related risk factors of IBD patients with anxiety and depression. SPSS 23.0 statistical software was employed for statistical analysis. The measurement datas were described as mean standard deviation(x±s). The chi-square test or Fisher's exact test was used to compare Classification variables. Independent data t-test was used to compare normally distributed continuous variables, and Mann-whitney U test was used to compare the continuous variables with non-normal distribution. Risk factors of anxiety and depression in IBD patients were analyzed by binary Logistic regression. P <0.05 was considered statistically significant.
[Results] 1. General information: A total of 81 IBD patients were enrolled, including 52 males and 29 females. The ratio of male to female was 1.79: 1. The age was ranged between 18 to 73 years old with an average age being (39.2 ± 14.2) years old. According to the modified Mayo score, 61 patients with UC were divided into 5 cases of remission, 14 cases of mild, 33 cases of moderate and 9 cases of severe. According to the simplified CDAI score, 20 patients with CD were divided into 5 cases of remission, 4 cases of mild, 6 cases of moderate and 5 cases of severe. 2. Comparison of anxiety and depression status between the UC group and the CD group: The results showed that there was no statistically significant difference in the anxiety and depression status between the UC group and the CD group (P>0.05). 3. Comparison of anxiety and depression among UC patients with different severity: According to the severity, UC patients can be divided into remission group, mild group, moderate group and severe group, the state of anxiety and depression were compared between the groups. The results showed that the difference of anxiety and depression state between four groups was statistically significant (P<0.05). 4. Comparison of anxiety and depression among CD patients with different severity: According to the severity, CD patients can be divided into remission group, mild group, moderate group and severe group, the state of anxiety and depression were compared between the groups. The difference of depressive state between four groups was statistically significant (P<0.05), and the difference of anxious state has no statistical significance (P>0.05). 5. Comparison of inflammatory cytokines levels among IBD patients with different anxiety states: According to the anxiety state, IBD patients were divided into four subgroups: non-anxious, mildly anxious, moderately anxious and severely anxious. After comparing the levels of serum inflammatory cytokines between the four groups, the differences in IL-6, IL-8, IL-1β and TNF-α levels showed statistical significance (P<0.05), while that in IL-10 levels showed no statistical significance (P>0.05). 6. Comparison of inflammatory cytokines levels among IBD patients with different depression states: According to their depression state, IBD patients were divided into four subgroups: non-depression, mild depression, moderate depression and severe depression. After comparing the serum levels of inflammatory cytokines between the four groups, the differences in IL-8 and IL-1β levels showed statistical significance (P<0.05), while the differences in IL-6, IL-10 and TNF-α levels showed no statistical significance (P>0.05). 7. Correlation analysis of risk factors with anxiety and depression: Single factor analysis showed that duration of illness, monthly income, availability of medical insurance, job status, IL-6, IL-10, TNF-α were significantly correlated with anxiety and depression (P<0.05). Binary logistic regression analysis showed that monthly income and duration of illness were significantly correlated with anxiety and depression (P<0.05), and IL-8 level was significantly correlated with depression (P<0.05).
[Conclusion] 1. Severity of UC was correlated with anxiety and depression, while severity of CD was only correlated with depression, which indicates that the severity of IBD is an important factor causing mental symptoms. 2. The level of anxiety and depression in IBD patients is related to the levels of serum IL-6, IL-8 and IL-1β, which indicates that the levels of serum inflammatory cytokines can reflect the degree of anxiety and depression in IBD

patients. 3. Level of serum IL-8 is an independent risk factor for IBD patients with depression, while economic status and duration of illness are independent risk factors for IBD patients with depression and anxiety.

「 P037 」

Clinical Significance of Serum Antibody Detection in Patients with Inflammatory Bowel Disease

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[Background] To detect the serum levels of p-ANCA, GAB and ASCA antibodies in patients with inflammatory bowel disease(IBD), and to explore the relationship between the three serum antibodies and disease severity, lesion locations and the clinical diagnostic significance in patients with IBD.
[Methods] 161 patients with IBD diagnosed in the First Affiliated Hospital of Dalian Medical University from 2016 to 2018 were selected in this study, who were further divided into UC group (105 cases) and CD group (56 cases). In UC group, there were 63 males and 42 females, with an average age of 47.08±15.67 years. In CD group, there were 33 males and 23 females, with an average age of 40.07±17.46 years. According to the Montreal classification, the UC group was divided into E1 group (15 cases), E2 group (46 cases) and E3 group (44 cases). According to the Mayo score, the UC group was divided into remission group (9 cases), mild group (22 cases), moderate group (48 cases), and severe group (26 cases). According to the Montreal classification, the CD group was divided into L1 group (25 cases), L2 group (18 cases), L3 group(13 cases). According to the Montreal classification of disease behavior, the CD group was divided into penetrating group (9 cases), non-penetrating group (25 cases)type, and narrow group (22 cases). According to the simplified CDAI score, there were 14 cases in mild group, 42 cases in moderate group. Fasting venous blood samples of 2ml were drawn in all subjects. Simple indirect immunofluorescence method was used to detect the p-ANCA, ASCA and GAB antibodies. The specificity, sensitivity, negative predictive value and positive predictive value of serum p-ANCA, GAB and ASCA antibodies were calculated. Calculation method: specificity = true negative/(false positive + true negative); Sensitivity = true positive/(true positive + false negative); Positive predictive value = true positive/(true positive + false positive); Negative predictive value = true negative/(true negative + false negative). SPSS23.0 software package was used for statistical analysis, the mean and standard deviation of the quantitative samples were calculated, and the relationship between the three antibodies and IBD was analyzed by chi-square test or Fisher's exact probability method. P<0.05 was considered as statistically significant difference.
[Results] 1. Comparison of positive rates of three serum antibodies between UC and CD patients: The positive rate of p-ANCA in UC group (51.43%) was higher than that in CD group (7.14%), and there was statistically significant difference between the two groups (p <0.001). The positive rate of GAB in CD group (60.71%) was higher than that in UC group (41.90%), and there was statistically significant differences between the two groups (P<0.05). The positive rate of ASCA in CD group (41.07%) was higher than that in UC group (7.62%), and there was a statistical difference between the two groups (P<0.05). 2. The relationship between the three antibodies and the lesion range and severity of CD patients The positive rate of ASCA in L3 group (69.23%) was higher than that in L1 group (40%) and L2 group (22.22%), and there were statistically significant differences in those groups (P<0.05). The positive rate of ASCA in the penetrating group (88.89%) was significantly higher than that in the non-penetrating group (24%) and the narrow group (40.9%), and there was a statistical difference between the three groups (P<0.05). The positive rate of ASCA in moderate activity group (50%) was higher than that in mild activity group (14.2%), and there was a statistical difference between the two groups (P<0.05). The positive rate (69.04%) in the GAB moderate activity group was higher than that in the mild activity group (35.7%), there was a statistical difference between the two groups (P<0.05). 3. The relationship between the three antibodies and the lesion range and severity of UC patients In UC group, the positive rate of p-ANCA in E2 group (62.50%) and E3 group (47.72%) was higher than that in E1 group (23.07%), there was a statistical difference between the three groups (p<0.05). The positive rate of p-ANCA in severe UC activity group (92.92%) was significantly higher than that in mild UC activity group (36.36%) and moderate UC activity group (45.83%), there was a statistical difference between the three groups (p<0.05). 4. Specificity, sensitivity, positive and negative predictive values of the three serum antibodies in the CD and UC groups (1) In CD group, the sensitivity, specificity, positive and negative predictive values of serum p-ANCA antibodies were 10.00%, 48.57%, 10% and 48.57%, respectively. The sensitivity, specificity, positive and negative predictive values of serum ASCA antibodies were 43.33%, 92.38%, 76.47% and 74.05%, respectively. The sensitivity, specificity, positive and negative predictive values of ASCA/ p-ANCA combined detection were 35.00%, 96.19%, 84.00% and 72.14%, respectively. (2) In UC group, the sensitivity, specificity, positive and negative predictive values of serum p-ANCA antibodies were 51.43%, 90%, 90% and 51.43%, respectively. The sensitivity, specificity, positive and negative predictive values of serum ASCA antibodies were 7.62%, 56.67%, 23.53% and 25.92%, respectively. The sensitivity, specificity, positive and negative predictive values of p-ANCA/ ASCA were 47.62%, 98.33%, 98.04% and 51.75%, respectively.
[Conclusion] 1. p-ANCA is positively correlated with the severity of UC, which can be used as a serological indicator to reflect the severity of the disease. 2. p-ANCA and GAB can be used to assist the diagnosis of UC, while ASCA can be used to assist the diagnosis of CD; p-ANCA and ASCA combined detection is helpful in differential diagnosis between CD and UC.

「 P038 」

Safety and Efficacy of Granulocyte and Monocyte Adsorption Apheresis in Patients With Ulcerative Colitis

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[Background]Ulcerative colitis (UC) is a chronic recurrent disease of gastrointestinal tract. It is often accompanied by local or systemic complications, which may seriously damage the quality of life and affect the life expectancy. Nowadays, the main clinical treatments include 5-amino salicylic acid, steroids, immunosuppressive agents, biological agents, nutritional support and surgical treatment. However, there are some limitations in efficacy and safety. Studies have shown that a large number of inflammatory cytokines produced by neutrophils and mononuclear cells through infiltrating the intestinal mucosa are considered to be key factors for the pathogenesis of UC. Granulocyte and monocyte adsorption apheresis (GMA) has been used as a non-drug therapeutic strategy in Japan and Europe to reduce the inflammatory response in patients with active UC, however, it has not yet been extensively used clinically in China. Therefore, the objective of this study was to investigate the short-term clinical efficacy and safety of GMA in the treatment of active UC, and to provide a new plan for UC.
[Methods]Totally, 27 active UC patients in the Digestive Department of the First Affiliated Hospital of Dalian Medical University from September 2015 to February 2018 who received GMA were enrolled in this study. The Mayo score, laboratory indexes [hemoglobin(HB),white blood cell count(WBC),neutrophil count, mononuclear cell count,lymphocyte count,platelet count,ESR,CRP] ,Rachmilewitz endoscopic index (EI) and adverse reactions were analyzed before and after the treatment, respectively. Spss 23.0 software was used for the statistical analysis,P < 0.05 was considered to be of statistical significance.
[Results]1. General data: Among the included 27 active UC patients, each patient received 5 to 10 sessions of the GMA treatment with 2 sessions a week. There were 15 male patients and 12 female patients, the average age of whom was 42. 14±8.92 years(30-76years)and the average course of disease was 43.10±33.49m(0. 67-96m). Among them, 4(15%) patients were in the mild active stage, 18(67%) patients were in the moderate active stage and 5(18%) patients were in the severe active stage. Moreover, the lesion range of 2(7%), 8(30%)and 17(63%)patients was E1, E2 and E3, respectively. 2. Laboratory indexes: 2.1 Comparison of blood routine before and after the treatment: The white blood cell count was 6.81±1.5×109/L before the treatment and 5.89±1.45×109/L after the treatment(P < 0.001). At the

same time, the neutrophil count was 0.67±0.31×109/L and 0.49±0.18×109/L before and after the treatment(P=0.001),respectively. The platelet count was 306.85±128.94×109/L before the treatment and 266.33±100.82×109/L after the treatment(P=0.002). The hemoglobin was 12 2.33±23.97 g/L before the treatment and 118.15±20.61 g/L after the treatment(P= 0.032). The above indexes were statistically significantly lower after the treatment (p < 0.05). The lymphocyte count was 1.81±0.63×109/L before the treatment and 1.99±0.78×109/L after the treatment.However, no statistically significance was found in this index(P > 0.05). 2.2 Comparison of inflammatory factors before and after the treatment: The ESR was 21.77±17.08 mm/h before the treatment and 19.54±20.44 mm/h after the treatment(P > 0.05), However, no statistically significance was found in this index. The CRP was 20.21±33.5 mg/L before the treatment and 8.4±12.37 mg/L after the treatment, which was significantly lower after the treatment(P=0.038). 3. Evaluation of the clinical efficacy: The Mayo score of the 27 patients was 8.11±1.72 before the treatment and 3.04±1.22 scores after the treatment, which was significantly lower after the treatment（P < 0.001).The Rachmilewitz endoscopic index of the 27 patients was 4.67±2.8 points before the treatment and 2.7±1.17 scores after the treatment, The above indexes were statistically significantly lower after the treatment(P=0.002). 8(30%) patients were remission, 16(59%) patients were effective, and 3(11%) patients were ineffective. The total effective rate was 89%. The complete mucosal healing rate was 30% (8/27), mucosal partial healing rate was 41% (11/27), total mucosal healing rate was 71% (19/27), and the endoscopy remission rate was 93% (25/27). 4. During the treatment of GMA, 1 patient experienced chest tightness and 1 patient experienced chest pain, which were both relieved in a short period of time.
[Conclusion] GMA therapy could effectively and safely improve the clinical symptoms and intestinal mucosa damage in patients with active UC, and control the inflammatory activity.

「P039」

Influence of GMA on Serum Cytokines in Patients with Ulcerative Colitis

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[Background]Ulcerative colitis (UC) is a chronic recurrent bowel disorder with the characteristics of intestinal mucosa inflammation and ulceration, which accompanied with intestinal symptoms and extra-intestinal manifestation. The imbalance between anti-inflammatory cytokines and pro-inflammatory cytokines plays an important role in the pathogenesis of inflammatory bowel disease (IBD). Granulocyte and monocyte apheresis (GMA) is a newly developed technique for the treatment of IBD, which has showed satisfactory efficacy, especially in UC.The purpose of this study is to measure the four serum cytokines including interleukin-1β (IL-1β), interleukin-6 (IL-6), interleukin-8 (IL-8), interleukin-10 (IL-10), and tumor necrosis factor-α(TNF-α) in the peripheral blood in patients with UC before and after GMA treatment to evaluate the influence of GMA treatment on these cytokines so as to study their possible role in the pathogenesis of UC.
[Methods]17 patients with active ulcerative colitis treated with granulocyte and monocyte adsorption apheresis (GMA) in the Frist Affiliated Hospital of Da Lian Medical University from April, 2017 to January, 2018. The diagnosis criteria is in line with "Consensus on Inflammatory Bowel Disease Diagnosis and Treatment" (2012 Guang zhou). All the patients under went intensive GMA therapy two sessions a week for 5 sessions as one complete course. Chemiluminescence immunoassay (CLIA) was used to measure the serum cytokines of IL-1β, IL-6, IL-8, IL-10, and TNF-α in the peripheral blood before and after GMA treatmentand then the changes of these cytokines were analyzed. SPSS20 software measured for the statistical analysis, and the values were expressed as mean±standard error (±X±SEM) with P<0.05 as statistically significant.
[Results]1. General data: 17 patients with UC who received GMA therapy was enrolled in the study. Among these patients, 12 were males, 5 were females. Themale to female ratio is 2.4:1. The ages of the patients ranged from 24 to 76 years old, with an average age of 49 ±15 years. The average course of the disease was 2.00±0.66 years. Based on Truelove & Witts criteria, 4 patients (24%) were mild, 10 (58%) were moderate, and 3 (18%) were severe in terms of severity. According to Montreal Classification, 2 patients (12%) were E1, 6 (35%) were E2, and 9 (53%) were E3 in terms of location. All the 17 patients finished 5 GMA sessions as one complete course. 2. Results of serum cytokines (1) The serum IL-6 was 21.01±4.65 pg/ml and 13.43±3.06 pg/ml before and after GMA therapy, respectively. The difference between the two groups was statistically significant (p=0.042). (2) The serum IL-8 was 261.58±55.54 pg/ml and 201.85±41. 96pg/ml before and after GMA therapy, respectively. The difference between the two groups was statistically significant (p=0.01). (3) The serum TNF-α was 57.11±6.73 pg/ml and 46.15±5.98pg/ml before and after GMA therapy, respectively. The difference between the two groups was statistically significant (p=0.046). (4) The serum IL-1β was 5.72±0.51pg/ml and 5.06±0.06 pg/ml before and after GMA therapy, respectively. The difference between the two groups showed no statistically significant (p=0.17). (5) The serum IL-10 was 5.81±0.73 pg/ml and 5.22±0.21 pg/ml before and after GMA therapy, respectively. The difference between the two groups showed no statistically significant (p=0.28). 3. Clinical manifestations and colonoscopy after GMA 16 out of 17 patients with UC experienced improvement or disappearance of abdominal pain, mucus-pus-bloody stool and diarrhea after one course of GMA. The clinical remission rate was 94%. 7 patients received re-check of colonoscopy after GMA therapy. 5 patients (71%) had partial mucosa healing, 1 patient (14%) had complete mucosa healing. The total mucosa-healing rate reached 86%. There was only one patient without mucosa healing.
[Conclusion]1. GMA is an effective therapy for UC patients. After GMA, the pro-inflammatory cytokines of IL-6, IL-8, and TNF-αsignificantly decreased, while anti-inflammatory cytokines of IL-10 shows no significant changes. This indicates that pro-inflammatory cytokines participate the development of UC. They may play an important role in the pathogenesis of UC. 2. After GMA, the pro-inflammatory cytokines of IL-6, IL-8, and TNF-α greatly decreased. Therefore, these cytokines may be used as useful index to evaluate the therapeutic efficacy of therapies, including GMA.

「P040」

Clinical Significance and Monitoring of Infliximab Trough Levels and Anti- Infliximab Antibodies in Patients with Inflammatory Bowel Disease

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[Background] To investigate the relationship between Infliximab serum trough levels (IFX-TLs), anti-IFX antibodies (ATI) and clinical effect of IFX in patients with inflammatory bowel disease (IBD), to analysis relevant factors of serum concentrations and ATI, and to explore the clinical significance.
[Methods]Seventeen patients with IBD who were treated with IFX from August 2016 to January 2018 were enrolled in this study. Each patient was tested for IFX trough levels and ATI before the infusion of IFX. Each patient continued to receive IFX treatment 1 to 6 times for a total of 40 IFX treatments,and 40 blood samples were obtained.The serum trough levels of IFX and ATI were measured by enzyme-linked immunosorbent assay (ELISA). C-reactive protein(CRP), erythrocyte sedimentation rate(ESR) ,serum albumin (ALB) and platelet(PLT) count were tested at the same time after drawing blood .All the ulcerative colitis（UC）Patients were evaluated by Mayo score while Crohn's disease（CD） patients by CDAI at every drawn blood point to assess efficacy of IFX. According to the consensus of diagnosis and treatment of inflammatory bowel disease(2012 Guangzhou)， the 40 treatments were divided into treatment-effective group and treatment-ineffective group.The statistical software IBM SPSS 21.0 was used for statistical analysis. The me asurement data were expressed as （±x±s）. Independent data t-test was used to compare data sets. P <0.05 was considered statistically significant.
[Results] 1. A total of 17 active IBD patients were enrolled, including 9 males and 8 females. The ratio of male to female was 1.125: 1. The age was ranged

between 17 to 60 years old with an average age being (37.53 ± 13.66) years old. There were 12 cases of UC patients, including 1 mild case (8.33%) , 2 moderate cases (16.67%) and 9 severe cases (75.0%). 5 cases were CD patients, including 3 moderate cases (60.0%), 2 severe cases (40.0%). 2. The relationship between serum trough levels of IFX and efficacy: Among 40 times of IFX treatments, 23 treatments were effective, the response rate to IFX was 57.5%. The IFX serum trough level in effective group was 0.1~19.81μg / mL, mean(4.16 ± 4.64) μg / mL .17 treatments were ineffective with the IFX-TLs being 0.05-4.3μg / mL,mean(1.38 ± 1.63)μg / mL was obviously lower than the effective group.The difference between the two groups was statistically significant (t = 2.355, P = 0.024). The IFX serum trough level was positively correlated with the effect of IFX. 3. The relationship between ATI and efficacy: 40 serum samples were also tested ATI, the results showed that positive rate of antibodies to IFX was 17.5％ (7 / 40), and the remaining 33 were negative. Six of seven patients with ATI positive antibody were ineffective of IFX. The levels of ATI in the effective group were significantly lower than those in the ineffective group (t = -2.162, P = 0.01). 4. The comparison of related parameters between effective group and ineffective group: The IFX trough levels of effective group were significantly higher than the ineffective group (P = 0.024), while ATI of effective group was significantly lower than the ineffective group (P = 0.01). CRP and ESR of effective group were significantly lower than the ineffective group, the difference was statistically significant (P <0.05). However there was no significant difference about ALB snd PLT between two groups (P> 0.05). 5. The comparison of related parameters about IFX-TLs: The positive rate of ATI in non-low IFX-TLs group was significantly lower than the low IFX-TLs group (3.45% vs. 54.55%). The difference of ATI level was statistically significant (t = 4.629, P <0.001). There was negative correlation between ATI and IFX-TLs. However,there was no correlation between IFX-TLs and CRP, ALB, ESR and PLT (P> 0.05).
[Conclusion]1.Low IFX trough levels and positive ATI are relative risk factors for losing response of IFX in IBD patients, IFX trough levels and ATI can be used as important indicators to evaluate and predict IFX efficacy. 2.In patients with IBD, the higher the ATI level is, the lower the IFX trough level will be.There is negative correlation between ATI and IFX-TLs. 3.For patients with IBD, running tests for ATI and IFX-TLs have an important clinical significance on assessing the efficacy of IFX treatment as well as predicting the loss of response.

「P041」

Treatment of moderate to severe ulcerative colitis by using granulocyte and monocyte adsorption apheresis(GMA) to evaluate its efficacy and safety–A report of 8 cases

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[Background] Ulcerative colitis (Ulcerative colitis, UC) is one of the phenotype of inflammatory bowel disease, which is chronic non-specific colitis. This kind of disease has seriously affected the people's life and work. It is more common in North America and Europe. However, in recent ten years in our country, this kind of disease is also showing a gradual increasing trend. Now UC has already become one of the common disease of digestive system diseases in China. Because the etiology is not well understood, the current aim of treatment is to induce and maintain clinical remission, reduce complications. Until now, the treatment of UC is still mainly based on drug therapy, including 5- amino salicylic acid, glucocorticoids, immunosuppressive agents and biological agents. Patients require life-long medications, and this can lead to drug dependency, loss of response together with adverse side effects. In order to avoid above issues happening, Japan first tries on non-pharmacologic therapy, namely cyt apheresis (CAP), including leukocytapheresis(LACP) and granulocyte and monocyte adsorption apheresis (GMA), after years of large-scale clinical practice, it achieved good therapeutic effect. Therefore, this article aims to use GMA in the treatment of moderate to severe ulcerative colitis to observe its efficacy and safety.
[Methods] From September, 2015 to February, 2016, we collected 8 patients of moderate to severe ulcerative colitis in our department. The GMA treatment was performed twice a week. Among before GMA treatment, after 5 GMA sessions of treatment and 10 GMA sessions of treatment, the vital signs, clinical symptoms (abdominal pain, diarrhea, mucus and purulent stool, fever, parenteral symptom, etc.), laboratory tests (blood and stool routine, ESR, CRP, etc), and colonoscopy findings were recorded.
[Results] 8 patients of moderate to severe UC patients with GMA treatment, including 3 males and 5 females, who aged between 34-60 years old. The average age was 44.00 ± 11.00 years old. Mean course was 2.5 years. The ratio of moderate and severe was 3 to 5. Four patients completed 5 GMA sessions of treatment and three patients completed 10 GMA sessions of treatment. One patient didn't finish GMA sessions of treatment due to economic reasons. 1. There was no significantly change in temperature, heartbeats and blood pressure before and after treatment. 2. ① The abdominal pain was improved or even disappeared except in one who underwent surgery. ② The average frequency of diarrhea was 14.29 ± 9.34 times per day before treatment, while it was 3.57 ± 2.07 times per day after 5 GMA sessions of treatment. There was a significantly statistical difference in the frequency of diarrhea before and after treatment(p < 0.05). The average frequency of diarrhea was 2.00 ± 1.73 times per day after 10 GMA sessions of treatment. ③ Mucous purulent stools were significantly relieved. A lot of pus cells, white blood cells and red blood cells were found in stool routine and occult blood was positive. They were significantly decreased after 5 GMA sessions of treatment, even disappeared after 10 GMA sessions of treatment. ④ 4 patients had fever with temperature varied from 38.5 ℃ to 39.5 ℃ . While, the temperature was decreased(Tmax≤38.5℃) after 5 GMA sessions of treatment. Then, after 10 GMA sessions of treatment, the temperature returned to normal. ⑤ The average body weight was 65.14 ±9.9 kg before treatment. It was 62.07 ± 9.7 kg after 5 GMA sessions of treatment. There was a significantly statistical difference in body weight before and after treatment (p < 0.05). ⑥ 2 patients had extraintestinal manifestations in whom the extraintestinal symtoms were not improved after 5 GMA sessions of treatment. 3. The average ESR was 31.14 ± 24.17 mm / h before treatment. It was 20.00 ± 17.13 mm / h after 5 GMA sessions of treatment. There was no significantly statistical difference before and after treatment(p > 0.05). The average ESR was 4.0 ±2.0 mm / h after 10 GMA sessions of treatment. The average CRP was 51.29 ±58.50 mg / L. It was 19.30 ± 18.24 mg / L after 5 GMA sessions of treatment. There was no significantly statistical difference before and after treatment(p > 0.05). The average CRP was 4.27 ± 1.71 mg / L after 10 GMA sessions of treatment. Also, there was no significantly statistical difference in ALT, AST, ALB, T-Bil, Ccr, BUN, Glu, K+ and Ca2+ before and after treatment(p > 0.05). 4. The average Mayo score was 10.14 ±1.46 points before treatment. According to Truelove&Witts Index, 3 patients were moderate type, while 4 patients were severe type. After 5 GMA sessions of treatment, the ratio among mild, moderate and severe were 2 to 3 to 2. Also, the EI score of 3 patients was significantly decreased after 10 GMA sessions of treatment. One case was in clinical remission, while two cases were in clinical response. 5. According to the self-efficacy evaluation scoring, 5 out of 7 patients felt satisfied after using GMA sessions of treatment, especially in fourth or fifth GMA session of treatment. 6. The symotoms of dizziness and chest tightness appeared during the first GMA treatment in one patient.
[Conclusion] GMA is a new, effective and safe non-pharmacologic therapeutic technique for patients with moderate to severe ulcerative colitis. It is worthwhile to recommend it for extensive clinical application for patients with ulcerative colitis.

「P042」

GMA vs. Infliximab for moderate to severe active ulcerative colitis: a retrospective observational study

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[Background] The aim of this study was to assess short-term efficacy in patients with moderate-severe ulcerative colitis(UC) treated with Granulocyte and Monocyte Adsorption Apheresis (GMA) and Infliximab (IFX).
[Methods] 23 patients with moderate-severe ulcerative colitis treated with GMA or IFX between January 2013 and February 2016 were enrolled from the First Affiliated Hospital of Dalian Medical

University. In GMA group: 8 patients received intensive GMA (2/wk), total 5 sessions. In IFX group: 15 patients treated with infliximab (5mg/kg intravenously at week 0, 2, 6). According to the clinical manifestation and laboratory parameters, comparison of the efficacy of 5 GMA sessions and finished infliximab intravenously at week 0, 2, 6 was made; Evaluation the changes of erythrocyte sedimentation rate, c-reaction protein, hemoglobin, albumin was also carried out. Spss 20.0 software was used for the statistical analysis , $p < 0.05$ was considered to be of statistical significance.
[Results] 1. General Data： There is no significantly statistical difference between the groups in gender, age, duration, Mayo score, the severity of coloscopy. In GMA group, male to female ratio is 1: 1.67; In IFX group, male to female ratio is 2: 1($p = 0.179$). In GMA group： the average age of patients was 44.38 ± 11.6 years (31-60 years)； In IFX group: the average age of patients was 38.47 ± 14.9 years (16-64 years) （$p = 0.343$). In GMA group: the average duration of patients was 58.8 ± 78m; In IFX group: the average duration of patients was 67.2 ± 88m（$p = 0.860$). In GMA group : Mayo score was 10.0 ± 0.92 points (9-11 points); In IFX group Mayo score was 10.27 ± 1.3 (6-12 points)（$p = 0.621$). Endoscopic score of GMA group was 2.88 ± 0.3 points, IFX group was 2.8 ± 0.4 points（$p = 0.669$). In GMA group : there were 3 moderate cases (37.5%) and 5 severe cases (62.5%); In IFX group : there were 8 moderate cases (53.3%) and 7 severe cases (46.7%),（$p = 0.667$). 2. Evaluation of efficacy of two treatment groups 2.1 Clinical evaluation In GMA group: 8 patients received 5 GMA sessions (2 times/wk). Clinical remission in 3 cases (42.85%), clinical response in 2 cases (28.57%), ineffective in 2 cases, 1 patient did not complete treatment. The total efficacy was 71.4%. In IFX group: 15 patients treated with infliximab (5mg/kg intravenously at week 0, 2, 6). Clinical remission in 8 cases (53.3%), clinical response in 6 cases (40.0%), ineffective in 1 case. The total efficacy was 93.3%. 2.2 The comparison of laboratory tests before and after GMA/IFX treatment In GMA group: There is no significantly statistical difference in ESR（$t=1.320$, $p=0.257$, $p > 0.05$), CRP（$t=1.564$, $p=0.193$, $p > 0.05$), ALB（$t=-0.923$, $p=0.408$, $p > 0.05$), Hb（$t=-0.409$, $p=0.703$, $p > 0.05$）UC patients before and after treatment. In IFX group: There is a significantly statistical difference in ESR($t=2.326$, $p= 0.037$, $p < 0.05$）, CRP ($t=2.651$, $p=0.020$, $p < 0.05$), ALB ($t=-5.008$, $p=0.000$, $p < 0.05$）, Hb ($t=-0.409$, $p=0.703$, $p > 0.05$) UC patients before and after treatment. 2.3 Comparison of effects between GMA / IFX group(after treatment) There is no significantly statistical difference between the two groups of the tatol clinical effective rate（$p=0.227$）. There is also no significantly statistical difference in Hb（$t=-0.941$, $p=0.36$, $p > 0.05$), ALB（$t=-1.574$, $p=0.134$, $p > 0.05$), ESR($t=-0.306$, $p=0.763$, $p > 0.05$), CRP（$t=-1.221$, $p=0.328$, $p > 0.05$) of the two gruops. 2.4 Extraintestinal manifestations treatment In GMA group,the extraintestinal manifestations of two UC patients were not improved atfer GMA treatment. In IFX group, extraintestinal symptoms of two UC patients were improved after IFX treatment. 2.5 Adverse reactions No serious adverse events occurred during GMA or IFX short-term remission induction therapy. Allergic reaction was found in only one patient of the IFX group. One patient of the GMA group appeared dizzy and chest tightness at the first GMA treatment.
[Conclusion] 1. Infliximab is effective in inducing short-term remission in moderate-severe active ulcerative colitis patients. 2. GMA and IFX had similar short-term effects on remission induction in patients with moderate-severe active ulcerative colitis, GMA is an alternative treatment for moderate-severely active UC, and its long-term efficacy needs further observation.

「P043」

The Prevalence of Extraintestinal Manifestations in IBD

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[Background] The aim of this retrospective study was to determine the characteristics and prevalence of the major extraintestinal manifestations of inflammatory bowel disease (IBD) and their relation to disease, in order to have a better understanding to manage IBD and EIMs of IBD.
[Methods] IBD patients seen at Gastroenterology department between January 2015 and January 2016 were retrospectively evaluated. 93 IBD patients (59 M, 34 F) were studied: 68 ulcerative colitis (73.1%) and 25 Crohn's disease (26.9%). The age of presentation varied from 20 to 75 years. We established the diagnosis on the basis of customary clinical criteria, endoscopic and histological scenarios. In each patient we evaluated and analyzed the data relating to sex, age at diagnosis, smoking habit, clinical history, and presence of EIMs.
[Results] Out of 93, EIMs were found in 19 (20.4%) patients; 13 UC (19.1%) and 6 CD (24%) patients. Among these 19 patients, multiple EIMs were seen in 10 patients, 3 EIMs maximum whereas 9 of them had single EIMs. As compared to UC patients CD patients were slightly more inclined to have immune-mediated complications and manifestations (arthropathies, ocular, mucocutaneous, and hepatobiliary) 19.1% vs 24%($P<0.05$). Among all these manifestations arthritis was most frequently seen in IBD patients with a prevalence of 15.1% but arthritis has relatively same prevalence among CD and UC patients 16% and 14.7% respectively($P>0.05$). Mucocutaneous manifestations were the second most common EIMs with prevalence of 8.6%, slightly more common in CD as compared to UC 12% and 7.35% respectively. Aphthous stomatitis and erythema nodosum were common EIM types of mucocutaneous manifestations in IBD patients; aphthous stomatitis: 5.38% and erythema nodosum: 3.22%. Other pro minent EIMs observed in IBD patients are as follows; hepatobiliary manifestations: 4.3%, ocular and endocrinological manifestations have the same values, 2.2% each. Patients with UC proctitis had decreased risk of immune-mediated EIMs, 13.33% (2/15) compared to those with left-sided colitis 17.14% (6/34) and pan-colitis 26.32% (5/19) ($p = 0.006$).
[Conclusion] Overall IBD patients are not highly prone to suffered with EIMs as only 1/5 of IBD patients experienced EIMs. CD patients as compared to UC patients are slightly more susceptible to have extraintestinal manifestations. Among all these EIMs the complications of the musculoskeletal system were the mostly observed ones. Arthritis was most frequently seen in IBD patients and it affected CD and UC patients equally. Whereas more extensive distribution of inflammation in UC increases the risk of EIM.

「P044」

Crohn's disease of the oesophagus: Case report and literature review

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[Background] To present and analyse the endoscopic and pathologic findings of an illustrative case of esophageal Crohn's disease and review the relevant literature.
[Methods]
[Results] Case Report A 43-year-old female with a history of chronic intermittent epigastric pain for the past four years, presented with weight loss, dysphagia, and odynophagia. The pain aggravated after food intake. She also had poor appetite and had lost 2kg in the last month. There were no distinguishable features in her personal and family histories. Vital signs were normal in her physical examination. She was hospitalised in the gastroenterology department of the First Affiliated Hospital of Dalian Medical University for further treatment. Upper endoscopy revealed an oesophageal ulcer, whitish in colour, of size of about 1.5cm x 1.0cm at about 21cm from the incisors. Mucosal oedema of the gastric mucosa was also seen suggesting chronic non-atrophic gastritis. Histopathological report of the oesophageal mucosa showed chronic inflammation and exudation with necrotic tissue. Granulation tissue was also seen. Colonoscopic examination with biopsies through the colon and terminal ileum revealed multiple shallow ulcers in the terminal ileum with the larger one of about 0.5cm in size. Taking into account the chronicity of the disease,the location of the ulcers (distal oesophagus and terminal ilium) together with the histopathological report, the diagnosis of crohn's disease of the oesophagus was made. This patient was treated with esomeprazole and sucralfate oral suspension and mesalazine.
[Conclusion] The diagnosis and treatment of esophageal CD cases is difficult. The presence of a stenosis with obstruction indicates a severe disease presentation that necessitates a more aggressive treatment. If the aforementioned medical therapy with steroid, immunomodulatory drugs and an anti-TNF

antibody does not alleviate the symptoms, balloon dilation or surgery are indicated in proportion to the severity of the symptoms and the technical feasibility.

「P045」

A Retrospective Study for Evaluation of Inflammatory Activity in UC Patients, A Report of 30 Cases

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[Background] This article aims to make a critical review of clinical, endoscopic, laboratory and image markers of disease with respect to their ability of establishing disease activity in UC patients.
[Methods] Determination of inflammatory state is crucial for the assessment of disease activity and for tailoring therapy. The retrospective study of 30 patients was carried out during (March 2015 – January 2016) to evaluate inflammatory activity in UC patients on the basis of patient's clinical history, serum markers, stool test, colonoscopy and CT findings. The study group consisted of 17 male patients and 13 female patients. The age of presentation varied from 20 to 75 years and the mean age of presentation was 49 years. In female mean age of presentation was 53 years (20 to 75 years) and in males 45 years (23 to 72 years). The clinical characteristics including sex, age, frequency of defecation, blood in stool, fever, heart rate, WBC, PLT, Hb, Albumin, ESR, CRP, ANCA, ASCA,Colonoscopy and CT findings were recorded to evaluate inflammation.
[Results] 30 patients from GIT department of 1st affiliated hospital of Dalian medical university were selected for the evaluation of disease activity. The age of the patients varied but most of them were above 50 years. Severity of the disease according to 'Truelove and Witts criteria" was mild in 13%, moderate in 40% and sever in 47% of the patients. According to colonoscopic findings of the total 30 patients, following were the major findings, congestion in 78%, erosion in 82%, polyps in 9%, superficial ulcer in 45% were seen. Mayo endoscopic score of activity is recorded in 30 patients with following observations, 15% mild, 44% moderate, and 41% severe. One of the most common CT finding was colonic wall thickness present in 87% of patients. Among other serum markers ANCA was positive in 60% and ASCA was positive in only 10 %. ESR has good correlation in acute phase of disease activity.
[Conclusion] There are different diagnostic tools to task the diagnosis of UC, predicting its course and determining activity. Many of these tools show promising results, but a lack of specificity remains a problem. Although colonoscopy is time consuming, invasive and expensive but still it displays direct evidence of mucosal injury. Endoscopy is the gold standard test for UC.

「P046」

Clinical Significance of D-dimer, PT, FIB and PLT in Patients with Ulcerative Colitis

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[Background] To analyze the clinical significance of D-dimer, PT, FIB and PLT measurement, to observe whether or not there is a hypercoagulable state or secondary hyperfibrinolysis in patients with active ulcerative colitis, and to assess whether or not D-dimer, PT, FIB, and PLT can be used as markers to evaluate the severity of the disease.
[Methods] To analyze retrospectively 56 UC patients hospitalized from May 1, 2014 to February 1, 2015 in the First Affiliated Hospital of Dalian Medical University. General data, coagulation index and routine hematology index were collected in this study. SPSS19.0 software was used for the statistical analysis, $p<0.05$ was considered to be of statistical significance.
[Results] 1. General data: among the 56 UC patients, 32 patients were male and 24 female, the ratio of male and female was 1.33:1. The patients' age was ranged between 16 to 75 years with an average age being 43.91±15.27years. 2. Chronic recurrent type was observed in 42 cases (75%) and initial type was observed in 14 cases (25%); proctitis type (E1) in 11 cases (19.64%), left colitis type (E2) in 29 cases (51.79%), extensive colitis type (E3) in 16 cases (28.57%); there were 22 mild cases, (39.29%), 25 moderate cases (44.64%) and 9 severe cases (16.07%). 3. The relationship between the severity of the disease and blood coagulation tests: 3.1 The severity of the disease and D-dimer: there is a statistical significance in UC patients with D-dimer in different conditions ($F=5.12, p=0.010<0.05$; there is a positive correlation between D-dimer and the severity of the disease ($r=0.44>0$, $p=0.002<0.05$). 3.2 The severity of the disease and PT: there is a statistical significance in UC patients with PT in different conditions ($F=6.89, p=0.002<0.05$) ; there is a positive correlation between PT and the severity of the disease ($r=0.38>0$, $p=0.004<0.05$) . 3.3 The severity of the disease and APTT: there is a statistical significance in UC patients with APTT in different conditions ($F=3.20$, $p=0.049<0.05$); there is no correlation between APTT and the severity of the disease($r=0.12$, $p=0.387>0.05$). 3.4 The severity of the disease and FIB: there is a statistical significance in UC patients with FIB in different conditions ($F=14.73$, $p=0.000<0.05$); there is a positive correlation between FIB and the severity of the disease ($r=0.65>0$, $p=0.000<0.05$) . 3.5 The severity of the disease and PLT: there is no statistical significance in UC patients with PLT in different conditions ($F=0.35$, $p=0.709>0.05$); there is a positive correlation between PLT and the severity of the disease ($r=0.29$,$p=0.030<0.05$). 4. Treatment and evaluation of curative effect: 4.1 General data: 17 patients receiving infliximab therapy, 10 cases were male and 7 female, the average age being 40.71±15.19 years. The outcome: relieved in 7 cases, effective in 8 cases, ineffective in 2 cases. Remission rate was 41.18%, effective rate was 88.24%. 4.2 The comparison of laboratory tests before and after infliximab therapy: 4.2.1 The comparison of routine laboratory tests before and after infliximab therapy: there is a statistical significance of Hb in UC patients before and after treatment ($t=3.52$,$p=0.003<0.05$); there is a statistical significance of ALB in UC patients before and after treatment ($t=4.60$,$p=0.000<0.05$); there is a statistical significance of ESR in UC patients before and after treatment ($t=5.10$, $p=0.000<0.05$); there is a statistical significance of CRP in UC patients before and after treatment ($t=2.90$,$p=0.012<0.05$). 4.2.2 The comparison of blood coagulation tests before and after infliximab therapy: there is a statistical significance of D-dimer in UC patients before and after treatment ($t=2.64$,$p=0.018<0.05$); there is a statistical significance of PT in UC patients before and after treatment ($t=5.02$,$p=0.000<0.05$); there is a statistical significance of APTT in UC patients before and after treatment ($t=4.68$,$p=0.000<0.05$); there is a statistical significance of FIB in UC patients before and after treatment ($t=5.84$,$p=0.000<0.05$); there is a statistical significance of PLT in UC patients before and after treatment ($t=6.03$,$p=0.000<0.05$).
[Conclusion] 1. D- dimer, PT, FIB can be used to evaluate the severity of UC, there is a positive correlation between D-dimer, PT, FIB and the severity of the disease. 2. Infliximab is effective in inducing remission in patients with UC in a short term. 3. D-dimer, PT, APTT, FIB, and PLT can be used to evaluate the effect of treatment in UC.

「P047」

Treatment of Inflammatory bowel disease Using Tumour Necrosis Factor Alpha Inhibitors (Infliximab) –A report of 28 cases

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[Background] To assess and observe the efficacy and safety of Infliximab in the treatment of IBD
[Methods] A total of 28 patients suffering from IBD (UC and CD) from that 18(11M/7F UC) and 10 (5M/5F CD) patients were started on infliximab therapy. We noticed patient symptoms and the age of the patients along with body weight, ESR, CRP, HB. We also noted the stool examination results were recorded before starting infliximab and also after each dose of infliximab was administered and the presence of any adverse reaction to the drug. The dose of infliximab administered was 5mg/kg body weight given at 0, 2 and 6 weeks for induction of remission and every 8 weeks thereafter for maintenance of remission. Infliximab was given in 250 ml of normal saline IVgtt over 2 hours.
[Results] The mean age of the UC patients was 41.72±1.30 and 46.80±2.32 years in CD. Values re-

corded were compared and marked improvement was seen before and after initiation of treatment. Patients' background data along with all their clinical features and biochemical laboratory features before infliximab treatment and after each dose of infliximab. Describe the variation of clinical symptom grading score levels of UC patients underwent that are received infliximab therapy. The clinical symptom grading scores levels of before a treatment varied from 10.56 ±1.50 of pretreatment. After treatment the clinical symptom grading score levels recorded 9.00±2.06 following the first infusion, by the 30th week the average CSG score had dropped to6.00 ± 2.12. When clinical symptom grading score levels were compared between the two groups that is before treatment group and after treatment group, in each of the infliximab doses significance difference were ($p<0.05$). CD patients the average clinical symptom grading (CSG) mean was 10.90±1.45 before infliximab administration. After treatment the clinical symptom grading score levels recorded 7.80±2.10 following the first infusion, by the 30th week the average CSG score had dropped to2.67±0.58.When clinical symptom grading score levels were compared betwee n the two groups that is before treatment group and after treatment group, there was significance difference ($p<0.05$) in each of the infliximab doses. UC patients the average laboratory parameters scores of patients before a treatment varied from 3.50 ± 0.51 of pretreatment. After treatment thelaboratory parameters score levels recorded 3.00± 0.69 following the first infusion and end of the 30thweek dose score levels were 2.00±0.71. When Laboratory parameters score levels were compared between the two groups that is before treatment group and after treatment group, there was significance difference ($p<0.05$) in each of the infliximab doses. CD patients the average score according to laboratory parameters mean were 3.60±0.52 pretreatment. After treatment the Laboratory parameters score levels recorded 2.60±0.70 following the first infusion, by the 30th week the average laboratory parameters score had dropped to1.00 ± 0.00. When Laboratory parameters score levels were compared between the two groups that is before treatment group and after treatment group, in each of the infliximab doses significance difference were ($p<0.05$). UC patients the average ESR levels of patients before a treatment varied from 27.72 ±1.64 mm/hr of pretreatment. After the treatment ERS levels recorded16.83 ± 1.72 mm/hr following just single dose and end of the 30th week ESR values were 13.60±1.02 mm/hr. When ESR levels were compared between the two groups that is before treatment group and after treatment group, there was significance difference ($p<0.05$) in each of the infliximab doses. Describe the variation of serum CRP levels of UC patients who underwent infliximab therapy. The CRP levels of patients before a treatment varied from 20.66 ±2.37 mg/l of pretreatment. After treatment the CRP levels recorded 10.94 ± 1.90 mg/l following the first dose and end of the 30th week CRP values were 3.54±0.37 mg/l. When CRP levels were compared between the two groups that is before treatment group and after treatment group, there was significance difference ($p<0.05$) in each of the infliximab doses. CD patients the average ESR levels before treatment mean were 34.20± 3.50 mm/hr dropped to the 14.20 ±3.94 mm/hr following just single dose of infusion and by the 30th week ESR level were 6.67±4.73mm/hr. When ESR levels were compared between the two groups that is before treatment group and after treatment group, in each of the infliximab dose were significance difference ($p<0.05$). CD patients the average CRP levels before treatment mean were 20.75± 1.99 mg/l dropped to 9.36 ±1.24 mg/l following just 1st dose of infusion and the levels 22 week dose CRP level were 5.66±0.61 mg/l decreased and 0.17±0.00 in the 30th week of doses. When CRP levels were compared between the two groups that is before treatment group and after treatment group, in each of the infliximab dose were significance difference ($p<0.05$).

[Conclusion] The TNF-alpha antagonist infliximab is an effective and safe treatment in patientswith IBD.

「P048」

Clinical Diagnostic Value of Perinuclear Anti-neutrophil Antibody and Anti-intestinal Goblet Cell Antibody in Ulcerative Colitis

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e-POSTER

[Background] To evaluate the diagnostic value of perinuclear anti-neutrophil antibody (pNACA) and anti-intestinal goblet cell antibody (GAB) in ulcerative colitis (UC) through determining their serum levels.

[Methods] A retrospective study of 200 UC cases from the First Affiliated Hospital of Dalian Medical University from 1.1.2009 to 1.1.2014 clinically diagnosed by the Chinese Consensus on the diagnosis and treatment criteria of Inflammatory Bowel Disease (IBD). The patients were all the first times to our hospital and the analytic content include general data, lesion degree, the course of disease, lesion range, clinical types and ertraintestinal manifestations and so on. The pNACA and GAB was detected by indirect immunofluorescence assay (IIF).

[Results] Among the 200 patients, 112 patients were male and 88 female. The ratio of male and female was 1.27:1. The positive ratio of pNACA in man and women was 27.5% (55/200), 23.5% (47/200), and GAB was 19.0% (38/200), 14.5% (29/200). pNACA, GAB in the comparison between male and women showed no statistical significance (P=0.571, P=1.000). The age of the patients ranged from 16 to 77 (46±15) years. The onset age was 5~76 (43±15)years, and the only one highest peak was 30~49 years (49/200, 24.5%). The age was divided into < 40 years group and ≥40 years group, and pNACA' positive ratio was 18.5%(37/200), 32.5%(65/200), and GAB was 11.5% (23/200), 22.0% (44/200). pNACA, GAB in the comparison between the two groups showed no statistical significance (P=0.828, P=0.643). The chronic recurrent type (116/200, 58%) was more common in this group. The positive ratio of pNACA in the initial and chronic recurrent type was 17.5% (35/200), 33.5% (67/200), and GAB was 15.0% (30/200), 18.5% (37/200). pNACA, GAB in the comparison between the two groups showed no statistical significance (P=1.000, P=0.649). The mile (116/200, 58.0%) and moderate (67/200, 33.5%) type were very common in this group. The positive ratio of pNACA in the mile, moderate and severe type respectively was 26.5% (53/200), 19.0% (38/200) and 5.5% (11/200), and GAB was 21.0% (42/200), 10.5% (21/200) and 2.0% (4/200). pNACA, GAB in the comparison between the three groups showed no statistical significance (P=0.177, P=0.527). The range classification presented left-sided colitis (86/200, 43.0%) > pancolitis (66/200, 33.0%) > proctitis (48/200, 24.0%). And the positive ratio of pNACA was 22.0% (44/200), 18.5% (37/200) and 10.5% (21/200), GAB was 15.5% (31/200), 7.5% (15/200) and 10.5% (21/200). pNACA, GAB in the comparison between the three groups showed no statistical significance (P=0.43, P=0.051). Mang people was with activity (194/200, 97.0%), and the posi tive ratio of pNACA, GAB respectively was 50.0% (100/200) and 32.0% (64/200) in this stage. pNACA, GAB in the comparison between the active and remission stage showed no statistical significance (P=0.438, P=0.404). There were only six patients with extra-intestinal manifestations (6/200, 3.0%), and one of this patients had three expressions, such as oral ulcer, skin rash and arthralgia. The result of extra-intestinal manifestations was liver and gallbladder disease 2 cases, joint pain 2 cases, skin rash 2 cases. The positive ratio of pNACA , GAB respectively was 1.5% (3/200), 0.5% (1/200). pNACA, GAB in the comparison between the two groups showed no statistical significance (P=1.000, P=0.666). We also found that there was statistically difference in severity between the groups with different extent of lesion ($P<0.001$). Comparison between the two groups showed a statistical significance ($p<0.001$). This suggest that the lesion range was more wider, the illn ess was more serious. The positive ratio of pNACA, GAB respectively in patients with UC was 51% (102/200), 33.5% (67/200), and the both was 19.0% (38/200). But when pNACA was positive, GAB'positive ratio was 37.3% (38/102); similarly, when GAB was positive, the positive ratio of pNACA was 56.7% (38/67). Among the 200 patients, we also found that the pNACA'expression had a significant rise in the severe patients with a wide range of lesion, especially in the severe pancolitis (6/8, 75.00%).

[Conclusion] 1.There is no statistically important correlation between pNACA, GAB and gender, age, clinical types, extraintestinal manifestations, lesion range, lesion degree ($P>0.05$). 2.Expression of pNACA, GAB can assist the diagnosis of UC, but they are not suit for UC's clinical screening. 3.The pNACA'expression has a significant rise in severe patients with a wide range of lesion, so pNACA(+) may be an independent risk factor in the pathogenesis of UC, and it is very useful in the clinical guidance. 4.Detecting both pNACA and GAB can not only improve their expression, but also rise the ratio of UC'diagnosis.

「 P049 」

A Retrospective Analysis of 294 Patients with Ulcerative Colitis

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[Background] To retrospectively analyze the relationship between course of disease, scope of lesions, colonoscopic index, severity of mucosa biopsy and severity of disease, and the clinical features in different scopes of lesions in patients with ulcerative colitis so as to offer theoretical basis for the clinical diagnosis and treatment of ulcerative colitis.
[Methods] 294 patients with ulcerative colitis from the First Affiliated Hospital of Dalian Medical University from 1.1.2009 to 1.1.2014 were collected in this study. The diagnosis was made based on "the National Consensus on the Diagnosis and Treatment of Inflammatory Bowel Disease" by the Digestive Disease Branch of Chinese Medical Association. SPSS13.0 software was used for the statistical analysis. The enumeration data were described by percentage. The measurement data were measured by means±standard deviation. Analysis of variance Chi-square test with $p<0.05$ was considered statistical significance.
[Results] 1. General data: 168 patients were male and 126 female. Male:female=1.33:1. The patients' age was ranged between 20 and 87 years with an average age being 45±15 years. There were 168 patients (57.15%) with ages between 30-49 years, considered to be the predilection age. 2. Clinical features:diarrhea (239 cases, 81.29%), abdominal pain (234 cases, 79.59%), purulent bloody stool (171 cases, 58.16%) were the most common clinical features. Weight loss was observed in 120 cases (40.82%), fever in 79 cases (26.87%), anemia in 90 cases (30.61%), tenesmus in 84 cases (28.58%), mucus stool in 60 cases (20.41%), bloody stool in 63 cases (21.42%), and extra-intestinal manifestations in 21 cases (7.14%). 3. Clinical types: chronic recurrent type was observed in 208 cases (70.75%) and initial type was observed in 86 cases (29.25%). 4. Relationship between endoscopic index, mucosa biopsy inflammation and severity of disease 4.1 Endoscopic index: mild, moderate and severe patients were classified according to the Rachmilewitz endoscopic index. The specific scores were 420, 478, and 328 in the three groups of patients, respectively. Comparison between the three groups showed a statistical significance ($p<0.05$). 4.2 Inflammation severity of mucosa biopsy: 122 out of 294 patients underwent mucosa biopsy. The results showed that 17 mild cases (94.44%) and 1 moderate case (5.56%) was found in Grade I; 11 mild cases (24.44%), 29 moderate cases (53.33%), and 10 severe cases (22.23%) were found in Grade II; and 16 mild cases (29.63%), 18 moderate cases (33.33%), and 20 severe cases (37.04%) were found in Grade III. Comparison between the three groups showed a statistical significance ($p<0.05$). 5.Scope of lesion and clinical characteristics:E1(Proctitis):bloody stool > diarrhea > abdominal pain>fever; E2 (left colitis): abdominal pain> diarrhea> bloody stool> fever; E3 (extensive colitis): abdominal pain> bloody stool> diarrhea> fever. The biggest proportion of patients with fever was found in E3 (extensive colitis). 6. The course and severity of disease analysis: 126 mild cases (63.64%), 48 moderate cases (24.24%) and 24 severe cases(12.12%) were found in 0 to 5 years of course; 12 mild cases (28.57%), 24 moderate cases (57.14%) and 6 severe cases (14.29%) were found in 5 to 10 years of course; 6 mild cases (11.12%), 24 moderate cases (44.44%), and 24 severe cases were found in course over 10 years. Comparison between the
[Conclusion] 1. Predilection age in patients with UC was 30-49 years. Males are more frequently affected than females. 2. The main clinical manifestations include diarrhea, abdominal pain, mucus purulent bloody stool. The patients are likely to lose body weight in varying degrees and extra intestinal manifestation is rare. The distribution of lesions is mostly relevant to proctitis (E1); Chronic recurrent type is the main type of lesions. 3. The severity of lesion is relevant to the course of disease, extent of disease, the endoscopic index, and the severity of mucosa inflammation.

「 P050 」

Therapeutic Effect of 5-ASA-loaded SiO2 Nanoparticles Targeting on Ulcerative Colitis in Mice

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[Background]Ulcerative colitis (UC) is a chronic, non-specific inflammation of the colonic mucosa and submucosa with clinical exacerbation and remission in the course of the disease. 5-aminosalicylic acid (5-ASA) is regarded as the first line treatment for patients with UC, but is often not effective due to not only the severity of the disease, but also the low drug concentration in the local colon. Therefore, it is urgently needed that the local colonic concentration of the drug be raised. With the development of nanotechnology, it becomes possible to target the drug to the diseased colon. In this study, 5-ASA -loaded SiO2 nanoparticles (5-ASA-SiO2 NPs) which possess a feature of targeting the inflammatory colon were prepared and its therapeutic effect was validated in UC model in mice.
[Methods]Micro-emulsion method was used to prepare SiO2NPs whose morphology was further analyzed by transmission electron microscopy(TEM). After a series of modification, 5-ASA-SiO2 NPs were synthesized by grafting 5-ASA molecules onto the surface of SiO2NP. In vitro cytotoxicity of 5-ASA-SiO2NPs on human colorectal adenocarcinoma cells (Caco-2 cells) was detected using CCK-8 method. 60 male BALB/c mice with 8-9 weeks of age were randomly divided into 6 groups with 10 each. Dextran sodium sulfate (DSS) method was used to establish the mice model of UC. The 6 groups of mice were as follows. (1) Normal group: mice in this group were allowed to freely drink distilled water, and administered with normal saline by intra-gastric tube once a day for 7 days. (2) Model group: mice in this group were allowed to freely drink 5% DSS solution, and administered with normal saline by intra-gastric tube once a day for 7 days. (3) Normal dosage group: mice in this group were allowed to freely drink 5% DSS solution, and administered with 200mg/kg 5-ASA suspension by intra-gastric tube once a day for 7 days. (4) High dosage group: mice in this group were allowed to freely drink 5% DSS solution, and administered with 400mg/kg 5-ASA suspension by intra-gastric tube once a day for 7 days. (5) SiO2NPs group: mice in this group were allowed to freely drink 5% DSS solution, and administered with 100mg/kg SiO2NPs suspension by intra-gastric tube once a day for 7 days. (6) 5-ASA-SiO2NPs group: mice in this group were allowed to freely drink 5% DSS solution, and administered with 100mg/kg 5-ASA-SiO2NPs suspension by intra-gastric tube once a day for 7 days. General conditions, body weight, stool features, bloody stool, grade of disease activity index (DAI) of the mice in each group were carefully observed and recorded. Histopathological examinations on colon mucosa was carried out by HemateinEosin stain. The colonic activity of MPO, serum TNF-α and IL-6 were determined by ELISA. Real-Time PCR was used to determine the gene expression of TNF-α mRNA and IL-6 mRNA in the colonic mucosa.
[Results] 1. Synthesis and loading rate of 5-ASA-SiO2NP SiO2NPs with a size of 90 nm was successfully prepared. The shape of nanoparticles was round with smooth surface and regular size, and good dispersion when identified by TEM. After a series of modification, the final product of 5-ASA-SiO2NPs were successfully synthesized and the drug-loading rate was 13.79 ± 2.50%. 2. In vitro cytotoxicity of 5-ASA-SiO2NPs CCK-8 detecting showed that when the concentration of 5-ASA, SiO2NPs, 5-ASA-SiO2NPs are 1mg/ml, the cell viability of human colorectal adenocarcinoma cells (Caco-2 cells) at 12h are 94.16±3.31%、74.81±2.03%、84.28±1.73%. 3. DAI and colonic histopathology scores (1)DAI and colonic histopathology scores(9.00±2.21, 10.00±1.50) in the model group indicated that DSS-induced mice model of UC was successfully established. (2) DAI and colonic histopathology scores in the model group is of no statistical differences with that in the SiO2NPs group(9.33±1.66, 9.33±1.73) ($p>0.05$). (3) DAI and colonic histopathology scores in normal dosage group(6.70±1.99, 6.10±0.99), high dosage group(5.20±2.11, 4.00±0.82) and 5-ASA-SiO2NPs group(4.80±1.81, 3.90±1.10)showed significant improvement when compared with the Model group, a statistical difference ($p<0.05$). (4)DAI scores and the percentage of body weight in high dosage group and 5-ASA-SiO2NPs group showed significant improvement when compared with normal

dosage group,a statistical difference (p<0.05). (5) DAI and colonic histopathology scores in the high dosage group and 5-ASA-SiO2NPs group showed no statistical differences (p>0.05). 4.Colonic activity of MPO (1) The ELISA results showed that there was no significant difference between model group(34.52±2.22U/mg tissue) and SiO2NPs group(34.09±1.72U/mg tissue) in the colonic activity of MPO(p>0.05); (2) The colonic activity of MPO in the normal dosage group(25.65±1.97U/mg tissue) , high dosage group(10.26±1.30U/mg tissue) and 5-ASA-SiO2NPs group (10.88±1.44U/mg tissue) was statistically lower than that in the model group (p<0.05). (3) The colonic activity of MPO in high dosage group and 5-ASA-SiO2NPs group was statistically lower than that in the normal dosage group (p<0.05). (4) There was no significant difference between high dosage group and 5-ASA-SiO2NPs group (p>0.05). 5. Expressions of IL-6and TNF-α at the level of protein (1) Results of ELISA showed that in expressions of IL-6 and TNF-α in blood there was no significant difference between model group(315.78±31.12pg/ml, 284.47±27.13pg/ml) and SiO2NPs group(317.79±18.91pg/m, 282.00±22.71pg/ml)at the level of protein(p>0.05); (2) Expression of IL-6 and TNF-α in the normal dosage group(226.18±17.46pg/ml, 153.31±17.91pg/ml), high dosage group (126.45±8.85pg/ml, 84.03±9.32pg/ml) and 5-ASA-SiO2NPs group (135.07±10.92pg/ml, 87.49±6.99pg/ml) was statistically lower than that in the model group (p<0.05). (3) Expression of IL-6 and TNF-α in the high dosage group and 5-ASA-SiO2NPs group was statistically lower than that in the normal dosage group (p<0.05). (4) There was no significant difference in expression of IL-6 and TNF-α between high dosage group and 5-ASA-SiO2NPs group (p>0.05). 6. Expressions of IL-6 and TNF-α at the level of gene (1) Results of Real-Time PCR showed that in expressions of IL-6 mRNA and TNF-α mRNA in colonic mucosa there was no significant difference between model group(26.11±1.64, 14.99±1.55) and SiO2NPs group(25.52±1.65, 14.67±1.29) at the level of protein(p>0.05); (2) Expression of IL-6 mRNA and TNF-α mRNA in the normal dosage group(10.32±0.98, 4.73±0.90), high dosage group (4.63±0.67, 2.02±0.48) and 5-ASA-SiO2NPs group (4.73±0.50, 1.83±0.39) was statistically lower than that in the model group (p<0.05). (3) Expression of IL-6mRNA and TNF-α mRNA in the high dosage group and 5-ASA-SiO2NPs group was statistically lower than that in the normal dosage group (p<0.05). (4) There was no significant difference in expression of IL-6mRNA and TNF-α mRNA between high dosage group and 5-ASA-SiO2NPs group (p>0.05).

[Conclusion] 1. 5-ASA-loaded SiO2 nanoparticles with effective drug loading rate and targeting colon for treatment of UC in mice is successfully established; 2. The 5-ASA-SiO2NPs with its low drug dosage can achieve similar effect of high dosage of 5-ASA which is 32 times as much as that of 5-ASA-SiO2NPs. One of the the anti-inflammation mechanisms of 5-ASA-SiO2NPs may be through inhibiting TNF-α and IL-6 expression. 3. This study lay the foundation for the future development and application of 5-ASA nanoparticles drug delivery system for the treatment of patients with UC.

「 P051 」

Clinical study on Saccharomyces boulardii in the Treatment Of Patients with Mild to Moderate Ulcerative Colitis

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[Background] Ulcerative colitis is chronic nonspecific recurrent inflammation of the colonic mucosa and submucosa. The etiology may be associated with immunity, heredity, infection and intestinal flora. Most of the patients with UC need medications such as aminosalicylic acid glucocorticoid and immunosuppressor. But there are several problems like low remission rate, high recurrence rate, adverse drug reactions. Lyophilized Saccharomyces boulardii (Sb) is a proprietary yeast preparation. It is currently the only yeast probiotic that has demonstrated efficacy in controlled clinical trials. Sb belongs to the group of simple eukaryotic cells (such as fungi and algae) and thus differs from bacterial probiotics that are prokaryotes. Sb could tolerate gastric acid and cholic acid,it will not be damaged by antibiotic. Preliminary studies have evaluated the effect of Sb in patients with inflammatory bowel disease (IBD). A beneficial effect in the maintenance of remission in ulcerative colitis has also been reported. Sb could prevent the pathogen invading or transplanting, modulate immune response, improve barrier effect and permeability of the intestinal mucosa. So as to improve the symptoms of the UC patients, prevent recurrence. Objective:With the therapeutic effect of Sb recognized, it may be worthwhile to study its potential efficacy in patients with further well-designed clinical trials and additional translational research studies. Eg.the dose, the time and the combined therapy with other drugs. Here, we compare the therapeutic effect of Sb combined with mesalazine on UC patients with mesalazine independently.

[Methods] :Excluding intestinal tract infection, DM, severe complications, postoperative colon, female in pregnancy or lactation period, multiple organ dysfunction patients, taking other probiotics during the treatment, and patients of non-compliance. 60 patients aged 18 to 75 years old with mild to moderate degree of UC were divided to 2 groups,combination group 30 cases(male 12,female 18) and mesalazine group 30 cases(male 14,female 16).Combination group received Sb 3 sachets daily in 3 divided doses and Mesalazine 8 sachets in 4 divided doses for 8 weeks,the control group received Mesalazine 8 sachets in 4 divided doses for 8 weeks. Clinical remission rate=(complete remission cases plus effective cases)/all cases. Complete remission: the symptoms was gone and the colon endoscopy showed the colon mucosa normal; effective:the symptoms almost gone and the colon endoscopy showed the colon mucosa mild inflammation or polyps; invalid:the symptoms was not disappeared and neither the colon endoscopy nor the histopath ology improved. Clinical symptom grade(CSG) endoscopy grade(EG) and histopathology grade(HG) were recorded pre- and post- the treatment. For all studies, data are expressed as .Measurement data by a T-test and enumeration data by a chi-square test with statistical significance.Comparisons are accepted for P<0.05.

[Results] (1) The grade(CSG 8.23±1.81,EG 2.13±0.35, HG 1.67±0.48) of combination group pre-the treatment and grade(CSG 7.87±1.87,EG 2.17±0.59, HG 1.73±0.45) of mesalazine group pre-the treatment had no significantly difference (P>0.05) . (2) The CSG of combination group after two week's treatment(7.2±1.61) was significantly lower than those pre-the treatment(P<0.05), The CSG of mesalazine group after two week's treatment(7.00±1.51) had no significantly decreased than those pre-the treatment(P>0.05). (3)The CSG of combination group after four week's treatment(4.63±1.79) was significantly lower than those pre-the treatment(P<0.05). The CSG of mesalazine group after four week's treatment(6.00±1.17) was significantly decreased than those pre-the treatment(P<0.05). (4) The grade of combination group post- the treatment(CSG 3.57±1.87, EG 1.47±0.57, HG 0.97±0.56, Total Grade 6.00±2.59) was significantly lower than those of mesalazine group post-the treatment(GSG 4.83±1.29, EG 1.57±0.63, HG 1.3±0.47, Total Grade 7.83±2.15). (5) The clinical remission rate in the combination group(46.7%) was significantly higher than the mesalazine group(20.0%) after 8 weeks` treatment (P<0.05).

[Conclusion] Studies evaluating Sb-combination got better effect on improving clinical symptoms endoscopy grades and histopathology grades, taking effect more quickly than using Mesalazine individually.

「 P052 」

The Colonic Expression of Flt3 and Flt3L in The Mice Model of Ulcerative Colitis

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[Background]Ulcerative colitis (UC) is a kind of Inflammatory Bowel Disease (IBD), causing ulcerative changes in the mucosal and sub-mucosal layers, but the etiology of UC still not so clear. In recent years, dendritic cell (DC) and regulatory T-Cell (T reg) are hot topic to study and we can find a lot of scholarly articles on these topics. The current opinion about immunomodulatory between DC and T reg play an important role in UC inflammatory reaction. Fms-like tyrosine kinase 3 (Flt3) and its' ligand (Flt3 ligand, Flt3L) involved in regulation of inflammatory reaction between DC and T reg. We used the mice model of UC in this study and take record of mice's general condition and observed disease activity index. Hematoxylin and Eosin stain (H&E) of intestinal mucosa was used to find the pathological changes under light microscope. Moreover, the ex-

pression of DC and T reg were measured by cellular level detection method, and divided into two groups according to normal expression and abnormal expression. Furt hermore, Flt3/Flt3L expression was detected from the gene and its protein level. Our main objective was to discuss about the major role of DC, T reg and Flt3/Flt3L in the process of UC development. Eventually, we would like to establish a theoretical foundation for the treatment of UC.
[Methods] The 20 BALB/c male mice models, weighing 25g, were randomly divided into two groups as normal group and model group. The animal model was established by mice themselves drinking of dextran sulfate solution (DSS). Normal group drank distilled water. Model group drank 50 g/L DSS for 7 days. The mice general condition and DAI were recorded, and all of the mice were hanged after 7 days to record the colonic mucosa damage index (CDMI). Hematoxylin and Eosin stain (H&E) of intestinal mucosa was used to find the pathological changes in UC model and normal mice intestinal mucosa under light microscope. Moreover, the expression of DC and T-reg were detected by flow cytometry at cellular level, immunohistochemistry was used to detect the changes in ratio of Flt3 expression, Flt3/Flt3L expression was identified by means of ELISA. Finally the Real-Time PCR was used to measure the gene changes of Flt3/Flt3L expression.
[Results] 1. Model group DAI (3.15±0.28) and CDMI score (2.44±0.24) was significantly higher than the normal group (DAI 0.00±0.00, CMDI 0.00±0.00), (P<0.05), mentioned that the mice models are successful. 2. Model group mucosal DC（0.19±0.18）% and T-reg expression on CD4 + T cells（4.11±2.14）% detected by flow cytometry was significantly lower than the normal group, (DC（2.83±1.52）%, T reg（14.02±1.73）%). (P<0.05) 3. Density mean protein expression of colonic mucosal Flt3 in model group（31.66±2.31）was lower than the normal group（82.19±5.34）, and model group has aggregation. (P<0.05) 4. Flt3L expression in blood of model group（36.25±6.34）pg/ml was significantly lower than normal（57.24±5.97）pg/ml and has statistical significant (P<0.05). 5. Gene level mucosal Flt3 mRNA expression（0.53±0.06）and Flt3L mRNA expression（0.10±0.18）were significantly lower than normal Flt3（1.01±0.13）and Flt3L（1.01±0.25）. (P<0.05)
[Conclusion] Immuno-regulatory imbalance in DC and T reg are found in the mucosa of DSS induced ulcerative colitis mice model, leading to impairing the signaling activity of Flt3 and Flt3L in DC and T reg and eventually resulting in development of ulcerative colitis.

「P053」

The protective role of AE-941（Neovastate）on ulcerative colitis in rats

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[Background]Ulcerative colitis (UC) is one of the inflammatory bowel diseases which is characterized by invading mucosa and submucosa predominantly. The current opinion about the pathogenesis of UC is that the imbalance of matrix metalloproteinases(MMPs) and tissue inhibitors of matrix metalloproteinases(TIMPs) plays a critical role in the degradation of extracellular matrix and mucosal ulceration.This study was aimed to observe the disease activity and colonic mucosa damage, to detect the expression of MMP-2, MMP-9 and to explore the possible therapeutic mechanism and the protective role of AE-941(Neovastate) in rats model of ulcerative colitis so that AE-941(Neovastate) could be possibly used in the clinical treatment of UC in the future.
[Methods]54 male SD rats were randomly divided into three groups of 6 rats each: normal group, AE-941(Neovastate)-treatment group, model group. The rat model of ulcerative colitis was established with TNB/ethanol complex method except the normal group which was clystered with normal saline instead. AE-941(Neovastate) (10mg/kg) was administered intragastrically to the AE-941(Neovastate)-treatment group once a day and normal saline was administered to normal and model group as controls. Observe the general states of rats model of ulcerative colitis and evaluate the disease activity index (DAI) everyday. Six rats from each group were sacrificed respectively on the day of 7, 21, 56 after clyster and then segments of colon were obtained. Light microscope was used to evaluate the colonic mucosa damage index (CMDI), Hematoxylin-Eosin(HE) staining was applied for pathological study, RT-PCR and IHC methods were utilized to detect the expression of MMP-2, MMP-9 on the levels of mRNA and protein.
[Results] 1. The scores of DAI, CDMI were significantly increased in the model group as compared to those in the normal group at the same time period (p<0.05). The scores of DAI, CDMI were significantly decreased in the AE-941(Neovastate) group as compared to those in the model group (p<0.05) 2. The expressions of MMP-2, MMP-9 were significantly increased in the model group as compared to those in the normal group on the levels of mRNA and protein at the same time period (p<0.05). The expressions of MMP-2, MMP-9 were significantly decreased in the AE-941(Neovastate) group as compared to those in the model group on the levels of mRNA and protein at the same time period (p<0.05). 3. There were significant correlations between the expression of MMP-2、MMP-9 and the severity of clinical symptoms, their correlating factors were 0.835, 0.917 respectivly(p<0.05).
[Conclusion] 1 Expression of MMP-2, MMP-9 is significantly increased in rats with ulcerative colitis, so MMP-2, MMP-9 may play an important role in the development of UC. 2. AE-941(Neovastate) can improve injuries of colonic mucosa induced by inhibiting the activity of MMP-2, MMP-9. Therefore, AE-941(Neovastate) has a protecrive role in rats model of ulcerative colitis and could be used clinically in treating UC with a great potential in the future.

「P054」

Cross-talk between gut microbiota and T cell balance in ulcerative colitis following fecal microbiota transplantation

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[Background] Fecal microbiota transplantation (FMT) may contribute to disease remission in ulcerative colitis (UC). We studied the microbiota change and its regulation on T cells after FMT.
[Methods] Patients with mild to moderately active UC were included to receive FMT therapy from one healthy donor between May 2018 and August 2019. The primary outcome was defined as remission with a total Mayo score of ≤ 2 and an endoscopic Mayo score of ≤ 1 at week 8. The intestinal histopathological changes, barrier function and inflammatory factors were evaluated. Fecal samples of donor and patients were analyzed by 16S rRNA gene-based microbiota analysis, and the colon Th17 cells and Treg cells were assessed.
[Results] 15/16 patients completed the 8-week-follow-up. 10 patients (66.7%) were in responders (RE) group, and 5 in non-responders (NR) group. Compared with those in the NR group, Nancy histological index and the fecal calprotectin decreased ($p < 0.001$, $p = 0.06$, respectively) and the expression of occludin and claudin1 increased in the RE group. Microbiota diversity increased significantly in RE group compared with that in NR group. The relative abundance of Proteobacteria decreased and the Firmicutes/Bacteroidetes ratio increased in the RE group after FMT intervention. Remission was associated with Faecalibacterium, and non-remission with Escherichia−Shigella. Compared with that at baseline, the abundance of Faecalibaterium increased significantly by 2.3-fold in the RE group at week 8 ($p = 0.043$), which was suppressed in the NR group. Fecal calprotectin ($r = -0.3816$, $p = 0.0031$) and Nancy index ($r = -0.4971$, $p = 0.0061$) was correlated inversely with the abundance of Faecalibacterium, respectively. In RE group the regulation of FMT on Th17/Treg imbalance was observed by decreased expression of RORγt and increased Foxp3. Minor adverse events were recorded in 33.3% (5/15) of the patients.
[Conclusion]The colonization of Faecalibacterium was correlated inversely with the intestinal inflammation and contributes to disease remission in UC. This effect of Faecalibacterium may be achieved by regulating the imbalance of Th17/Treg in patients with UC.

e-POSTER

P055

Enhanced Resistance to Infection in the Gut through the Bile Acid Metabolism of Lactobacillus reuteri

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[Background] Invasion of pathogens in the gut caused many digestive system diseases. Antibiotic therapy may induce drug-resistant pathogens overproduction, which triggers serious endogenous diseases and more challenges for therapy. Microbial metabolites as drug candidate are the direction of drug development. Bile acids metabolism of microbiota could regulate microbiota composition and improve resistance to infection.
[Methods] We screened a new strain Lactobacillus reuteri ZD-1 from feces of mice which was fed with bile acids. L. reuteri ZD-1 had the ability to specifically degrade taurine-conjugated bile acids, and the metabolites could promote differentiation of the regulatory T cell (Treg) in the intestine. In view of this, we proposed that L. reuteri ZD-1 could defense pathogen infection with its roles in the gut immunity and microbiota through degrading bile acids.
[Results] Our result showed that the C57BL/6 mice that were orally administered L. reuteri ZD-1 with the metabolites of taurodeoxycholic acid sodium salt (TDCA) had more resistance to Citrobacter rodentium or DSS compared to the mice that were only administered L. reuteri ZD-1 or TDCA. This anti-inflammatory of L. reuteri ZD-1 in the gut and its relationship with bile acid metabolites effect will be further verified by determining the influences of L. reuteri ZD-1 on metabolites, metagenomics and microbiome that were related to bile acids, and immune system.
[Conclusion] This study will clarify the mechanism of colonization resistance to pathogen and Inflammatory bowel disease of L. reuteri and provide a scientific basis for the clinical application. It is also the foundation for the development of anti-infective drugs using the bile acid metabolites of L. reuteri.

「P056」

Digital Spatial Profiling Reveals Functional Shift of Enterochromaffin Cell in Patients with Ulcerative Colitis

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[Background] Enterochromaffin (EC) cell is the major component of enteroendocrine system, which is crucially involved in ulcerative colitis (UC). However, EC cell is rare and scattered, which largely limited the investigation on its function.
[Methods] Colonoscopic biopsies from 8 UC patients and 7 healthy subjects underwent digital spatial profiling (DSP) to acquire the transcriptomic profile of EC cell and epithelium. Differential expression analysis, Gene Set Enrichment Analysis (GSEA) and Weighted Gene Co-Expression Network Analysis (WGCNA) were performed to identify differential genes and pathways, as well as co-expression network. Correlation between EC-specific genes and pathological markers in UC was calculated using GEO dataset. The expression of CHGB and RGS2 was validated by immunofluorescence.
[Results] In healthy subjects, we found 15 genes significantly enriched in EC cell, which functionally concentrated in protein and bioamine synthesis. A co-expression network of EC cell containing 17 hub genes (TPH1, CHGA, GCLC, etc.) was identified. In UC patients, EC cell`s capacity of protein synthesis was up-regulated while olfactory sensation was down-regulated. Novel immunological functions, e.g., antigen processing and presentation, were gained by EC cell. GCLC and CHGB, two EC-specific genes, were positively correlated to the barrier function markers in UC, while RGS2 positively correlated to markers of epithelial repair and microbial detection.
[Conclusion] Our results demonstrate the transcriptional signatures of EC cell in human colon. EC cell`s novel functional shift from sensation to secretion and immunity indicates its pivotal role in ulcerative colitis.

e-POSTER

「P057」

Mitochondrial fission is involved in the early inflammation of UC

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[Background] Mitochondrial dysfunction is known to be evident in intestinal epithelial cells (IECs) from patients with UC, and IECs inflammation is thought to contribute to the early stage of UC, but a unifying mechanism tying them together remains limited. Excessive fission mediated by DRP1 is frequently associated with mitochondrial dysfunction. Here, we explore the relationship between mitochondrial fission and IECs inflammation, and the role they play in the pathogenesis of UC.
[Methods] WB, qPCR, IHC, IF and TEM was performed to measure the mitochondrial fission in colon mucosal samples from patients with UC and TNBS-induce colitis mice. The mitochondrial fission inhibitor Mdivi-1(1.5mg/kg), or vehicle were delivered to mice treated with trinitrobenzene sulfonic acid（TNBS）. 3.Colonic cell line was used to explore the relationship between mitochondrial fission and IEC inflammation.
[Results] 1. Excessive mitochondrial fission was found in IEC from UC 2. Increased DRP1 activation and excessive mitochondrial fission was found in TNBS-induced colitis in mice 3. Mdivi-1 treatment attenuated TNBS-mediated colitis in mice. 4. Mdivi-1 treatment reduces the TNF-α production of IECs and the activation of intestinal myofibroblast (IMF) in the early stage of colitis in mice 5. Mdivi-1 suppressed LPS-induced TNF-α production in IECs 6. Mdivi-1 decrease the activation of IMF when co-cultured with IECs
[Conclusion] Our finding indicate that mitochondrial fission involved in early IECs inflammation, and Mdivi-1 can improve colitis partially through limiting TNF-α production of IECs and the activation of intestinal myofibroblast (IMF) in the early stage of colitis. Thus, Mitochondrial fission can be used as a therapeutic target for UC.

「P058」

High fat diet aggravates DSS-induced colitis by increasing LPL-regulated dendritic cell pro-inflammatory alteration

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[Background] Western diets characterized by high fat is one of the risk factors of inflammatory bowel disease (IBD) including ulcerative colitis and Crohn disease. However, the detailed mechanisms remain to be obscure. Dendritic cells (DCs) are the sensor linking intestinal microenvironment and mucosal immune system, exploring how high fat diet effect the functions of dendritic cells may provide new insights into the pathogenesis of IBD.
[Methods] We induced acute and chronic colitis using DSS, then sorted the CD11c+ dendritic cell from lamina propria and mesenteric lymph nodes respectively by MACS, and analyzed the changes in gene expression using RNA-seq. Then we compared genes which express differently with HFD and after DSS treatment, and find out the intersection part, therefore, we predicted the inflammatory status of DCs and the potential regulatory genes.
[Results] We find that lipoprotein lipase (LPL) increased both with HFD and after DSS treatment, with increased pro-inflammatory cytokines expression.
[Conclusion] High fat diet induces the expression of LPL, regulating the pro-inflammatory reaction of colon dendritic cells, which aggravates the DSS-induced colitis.

「P059」

MiR-204-5p regulates macrophage-mediated inflammatory response in ulcerative colitis

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e-POSTER

[Background] The pathogenesis of ulcerative colitis (UC) is associated with a dysregulated mucosal immune response. UC-related deregulation of MicroRNA (miRNA) biogenesis has been suggested, but the underlying mechanisms remain elusive. This study aims to explore how miR-204-5p involve in the development of UC by regulating the inflammatory response of macrophages.
[Methods] MiRNA sequencing were used to detect the differentially expressed miRNAs, and quantitative real-time PCR was used to identify the changes in UC. The expression profile of miRNAs and mRNAs in UC mucosa and healthy controls (HCs) mucosa was analyzed. MiR-204-5p location was confirmed by fluorescence in situ hybridization (FISH). Besides, the correlation between miR-204-5p expression and UC characteristics was analyzed. Bioinformatic analyses, and transfection experiments in vitro were performed to explore the effects of miR-204-5p.
[Results] A total of 244 miRNAs were dysregulated in UC colonic mucosa compared with HCs. Accordingly, miR-204-5p was significant downregulated in UC patients and relevant to Mayo scores/histological score. FISH showed that it expressed in macrophages. In vitro, miR-204-5p expression was downregulated in LPS/TNF-α-stimulated THP-1 cells, while IL-6, IL-1β and other inflammatory factors are upregulated. Bioinformatic analyses showed miR-204-5p could bind to MMP9. The MMP9 and IL-6, IL-1β could decrease with miR-204-5p overexpression in THP-1 cells. Rather, MMP9 and IL-6, IL-1β could increase with miR-204-5p inhibitor in THP-1 cells.
[Conclusion] MiR-204-5p was downregulated in UC patients and related to UC severity. MiR-204-5p participated in the inflammatory response of UC patients by promoting the expression of MMP9 in macrophages.

「P060」

MicroRNA-204-5p-mediated regulation of neuroplasticity contributes to visceral hypersensitivity in TNBS mice model

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[Background] Irritable bowel syndrome (IBS)-like symptoms were reported in patients with inflammatory bowel disease (IBD) in apparent remission, which is known as post-IBD IBS. Alteration of visceral sensation is common in post-IBD IBS. MicroRNAs have emerged as regulators involved in many gastrointestinal diseases. Our goals were to elucidate the roles of miR-204-5p in the pathogenesis of post-IBD IBS in TNBS mice model.
[Methods] Mice were received TNBS enemas once. After 28 days, colorectal distention test was performed to assess visceral sensitivity. The expression of miR-204-5p was evaluated in colon of TNBS mice model compared to control group. What's more, EphB2 expression was also determined. Bioinformatic analyses, luciferase reporter assays and transfection experiments in SH-SY5Y cells were performed to explore the effects of miR-204-5p.
[Results] Decreased miR-204-5p levels were found in colon of TNBS-induced visceral hypersensitivity mice. Intraperitoneally injection of miR-204-5p agomir may reduce colonic hypersensitivity. Bioinformatic analyses and luciferase reporter assays showed miR-204-5p could bind to EphB2. In SHSY5Y cell line, miR-204-5p could negatively regulate the expression of EphB2 and downstream signaling proteins, impacting on neuronal activation. In vivo, intraperitoneally injection of miR-204-5p agomir could also decrease the expression of EphB2.
[Conclusion] There were significant decreases of miR-204-5p levels in TNBS mice model. MiR-204-5p might participant in alteration of visceral sensation via EphB2. There was a potential therapeutic role for miR-204-5p, which may reduce colonic hypersensitivity in post-IBD IBS.

「P061」

Nuak2 interacts with TGFβ and regulate glucose induced Treg differentiation

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[Background] Nuak2, as a member of AMPK related kinases, has been considered as an essential energy and metabolic sensor in several types of cells. Recent studies showed that nuak2 was deeply linked with TGFβ, a multifunctional mediator of immune cell. However, the role of Nuak2 in T cell response is still not fully revealed. Our previous study showed that glucose promotes Treg differentiation.
[Methods] In this report, we investigated role of Nuak2 in intestinal immune response and whether Nuak2 participate in glucose induced Treg differentiation.
[Results] Consistent with our previous results, we found that 6% glucose in drinking water promoted regulatory T cells (Treg), but not Th1 and Th17 cells, differentiation in the mesenteric lymph nodes (MLN). In vitro assay, glucose promotes Treg differentiation and glucose-treated T cells cultured under Treg conditions showed enhanced suppressive activity toward naïve T cell proliferation. Of note, glucose significantly upregulated the expression of Nuak2 in vitro culture. Moreover, we found that Nuak2 showed higher expression on T cell under Treg conditions，but not Th0 and Th17 conditions.
[Conclusion] From our RNA sequencing results, we found that Nuak2 was significantly decreased in UC patients. Collectively, our study indicates that Nuak2 may participate in regulating glucose induced Treg differentiation, which plays an important role in intestinal hemostasis.

「P062」

identification of differentially expressed genes in patients with ulcerative colitis who lose to respond to infliximab treatment and prediction of potential therapeutic targets

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[Background] Select the differentially expressed genes (DEGs) of patients with ulcerative colitis (UC) who are treated with infliximab (IFX), and predict the potential treatment of IFX-unresponsive UC patients through DEGs function and signal pathway.
[Methods] Use GEO2R online tool software to analyze IFX-treated UC patient data sets GSE14580, GES12251, and GSE23597 to obtain DEGs; construct DEGs protein–protein interaction (PPI) network through String database, and use David software for functional and signal pathway enrichment analysis;The hub genes were screened through Cytoscape's cytoHubba plug-in and imported into the DGIdb database to find potentially effective biological agents.
[Results] A total of 143 DEGs were identified, including 10 up-regulated genes and 133 down-regulated genes; GO and KEGG analysis indicated that DEGs were mainly enriched in inflammatory response, immune response, response to vitamin D, TLR pathway, and TNF signaling pathways. Using Cytoscape and cytoHubba software, the top 20 key genes with the highest scores were screened and imported into the DGIdb database. The top three potentially effective biologics were sarilumab, avacopan, and toralimab. . Further verification and support of clinical data is needed.
[Conclusion] There are significant differentially expressed genes (DEGs) in UC patients who respond to and lose response to IFX. Further bioinformatics analysis and the application of the DGIdb database suggest that sarilumab, avacopan, toralimab is most likely to be an effective therapeutic target for patients with UC who lose response to IFX. It provides a new perspective for further clinical research.

「P063」

Serum Interleukin 38 Levels are Associated with Disease Severity and Lesion Location in Patients with Crohn's Disease

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[Background] Interleukin-38 (IL-38) takes part in inflammation of gastrointestinal tract, but its role in Crohn's disease (CD) is barely studied. We aim to explore the correlations between serum IL-38 levels and disease severity or other influential variables in patients with CD.
[Methods] From December 2017 to June 2018, 100

e-POSTER

consecutive patients with CD and 80 healthy individuals were recruited from our tertiary center. All participants received measurement of serum IL-38 levels by an enzyme-linked immunosorbent assay. Correlations between the serum IL-38 levels and disease severity were examined by Spearman's rank correlation analysis and t or ANOVA test.
[Results] The serum IL-38 levels were significantly upregulated in the patients with CD (56.5±20.5 pg/mL) than in the control individuals (49.8±6.0 pg/mL) (P=0.0015); and they are related to disease severity (severe CD: 60.6±10.6 pg/mL vs mild CD and CD with clinical remission: 53.1±8.6 pg/mL and 53.5±7.1 pg/mL)(P=0.023&0.024). Besides, CD patients with upper gastrointestinal tract involvement had significantly higher serum IL-38 level than those without upper gastrointestinal tract involvement.(65.4±12.2 pg/mL vs 53.3±7.2 pg/mL, P<0.0001)
[Conclusion] The serum IL-38 levels were upregulated in the patients with CD and correlate with disease severity. CD patients with upper gastrointestinal tract involvement had location.

「 P064 」

Depression exacerbates dextran sulfate sodium-induced colitis via IRF5-mediated macrophage polarization toward the M1 phenotype

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[Background] Patients with inflammatory bowel disease (IBD) and concurrent depression are predisposed to more severe disease activity and a worse prognosis. Our previous study showed that macrophage polarization toward the M1 phenotype with increased proinflammatory cytokine production, decreased phagocytosis, and enhanced impairment of the intestinal epithelial barrier may contribute to the exacerbation of IBD in depression. Herein we attempted to further explore the role of macrophage polarization in the impact of depression upon IBD by manipulating macrophage polarization using lentiviral-mediated shRNA-IRF5 interference on dextran sulfate sodium (DSS)-induced colitis rats with concurrent depressive-like behavior.
[Methods] Depressive-like behavior was induced by repeated forced swim stress. Colon length, disease activity index (DAI), colon morphology, histology, ultrastructure of epithelial barrier and lamina propria macrophage were compared between DSS colitis rats with and without depressive-like behavior. Immunohistochemistry was performed to determine macrophage polarization. Western blot and immunofluorescence were performed to determine the expression of interferon regulating factor 5 (IRF5). IRF5 shRNA was delivered via lentiviral vector infection into rat peritoneal macrophages. Flowcytometry was performed subsequently to test if IRF5 silencing could affect macrophage polarization in vitro. IRF5 shRNA lentivirus was introduced into colon by enema, then the parameters including DAI, colon histology, lamina propria macro-phage polarization, and the expression of cytokines including TNF-α, IL-1β, IL-10 of colon tissues were measured.
[Results] Here we found severer colonic inflammation in depressed versus non-depressed DSS-colitis rats. Subepithelial macrophages of DSS-colitis rats with depressive behavior exhibited smaller size and reduced intracellular granule diversity compared with those from nondepressed DSS-colitis rats. Increased polarization toward the M1 phenotype, elevated expression of IRF5, and co-expression of IRF5 with CD86 were found in depressed versus nondepressed DSS-colitis rats. Lentivirus-mediated shRNA interference with IRF5 expression switched rat peritoneal macrophage polarization from the M1 to the M2 phenotype in vitro. Silencing IRF5 improved disease activity index (DAI) and colon histology, inhibited M1 polarization, and downregulated proinflammatory cytokine expression to a greater extent in depressed versus nondepressed DSS-induced colitis rats.
[Conclusion] IRF5-mediated macrophage polarization towards M1 phenotype with subsequent increased production of proinflammatory cytokines may likely underlie the deterioration of DSS-induced colitis caused by depression.

e-POSTER

「 P065 」

Selective oxidative protection leads to tissue topological changes orchestrated by macrophage during ulcerative colitis

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[Background] Ulcerative colitis(UC) is a chronic inflammatory bowel disorder with highly cellular heterogeneity. Mass cytometry (Cy-TOF) and single-cell RNA sequencing (scRNA-seq) have revealed cellular heterogeneity of UC. However, comprehensive elucidation of tissue topological changes within the UC ecosystem is still missing. And we aimed to illustrate compositional and spatial changes of the UC ecosystem.
[Methods] Imaging mass cytometry (IMC) and scRNA-seq were applied to depict the single-cell landscape of colon ecosystem.
[Results] We noticed tissue topological changes featured with macrophage disappearance reaction (MDR) in UC region. MDR only occurred for CD163+ tissue-resident macrophages. We found reactive oxygen species (ROS) level were higher in UC region but ROS scavenging enzyme SOD1/2 were barely detected in resident macrophages, resulting selective oxidative protection for inflammatory macrophages and resident macrophage disappearance reaction. Furthermore, inflammatory macrophages replaced resident macrophages during UC, which played a key role in forming the inflammatory cellular network by producing TNF-α and IL-1β.
[Conclusion] Our study dissected the microenvironment of UC lesions at single-cell resolution while preserving its architecture, based on which, we discovered the mechanism of MDR in UC region and resident macrophage specific MDR resulted in infiltration of inflammatory macrophage, which formed the cytokine producing network within the local cellular neighborhood.

「 P066 」

Early Fecal Microbiome Transfer after donor defecation determines response in patients with moderate to severe ulcerative colitis

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[Background] Fecal microbiome transfer (FMT) targeting gut microbiome dysbiosis is an emerging therapy for ulcerative colitis (UC). There is however no consensus on protocols for performing FMT in UC, especially in relation to time after donor feces defecation.
[Methods] This is a single-center retrospective analysis of patients with moderate-severe UC (total Mayo clinic score ≥6 and endoscopic Mayo clinic sub score of ≥2) treated with FMT between September 2017 and December 2019 at Dayanand Medical College and Hospital, India. Fresh fecal samples from unrelated healthy voluntary donors were administered through colonoscopy at weeks 0, 2, 6, 10, 14, 18, and 22. Time interval between donor feces defecation and FMT procedure was recorded for each FMT session and the mean time of seven sessions was designated aika. Impact of aika on clinical response and safety of FMT was evaluated.
[Results] During the study period, 123 adult patients [mean age 33.75±11.97 years, 61.8% (n=76) males] with moderate-severe UC (mean total Mayo clinic and endoscopic Mayo clinic scores 7.49±1.60 and 2.50±0.50, respectively) were treated with FMT. The mean aika was 2.29±0.75 hours. The aika was smaller in patients who responded to FMT as compared to non-responders (2.09±0.60 vs 2.32±0.75 hours, p<0.0001) as well as in patients achieving clinical remission (2.09±0.58 hours versus 2.43±0.81 hours, p=0.05). There was no significant impact of aika on adverse effects except the incidence of borborygmi after FMT, which was higher in patients with aika ≤2 hours.
[Conclusion] Early FMT after donor feces defecation favorably impacts the clinical response rates in patients with active UC.

「 P067 」

GAS6 from CD200+ adipose-derived stem cells mitigates colonic inflammation via a macrophage-dependent manner

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[Background] Stem cell therapy is a promising cell-based treatment modality for inflammatory bowel diseases (IBD), however its application is limited by the nature of cell heterogeneity.
[Methods] Single-cell RNA-sequencing was performed on the adipose-derived stem cells (ADSCs) to uncover the well-documented heterogeneity in an unbiased manner. The in vitro immunomodulatory effect of CD200+ ADSCs was evaluated by co-culturing with CD4+ T cells and macrophages. In vivo therapeutic value of CD200+ ADSCs was assessed using a murine colitis model induced by dextran sulphate sodium (DSS) or 2, 4, 6-trinitrobenzene sulphonic acid (TNBS).
[Results] CD200+ ADSCs were identified as a novel subpopulation of ADSCs, which were featured by the immunoregulatory functions based on the gene ontology analysis. The immunoregulatory functions of these cells were further confirmed by co-culturing with CD4+ T cells or macrophages. Administration of CD200+ ADSCs effectively reduced intestinal inflammation in mice IBD models. Furthermore, we found CD200+ ADSCs-derived GAS6 exerted protective effects on experimental colitis by promoting macrophage M2 polarization via the Mer/PI3K/Akt/GSK3β signaling pathway.
[Conclusion] This study uncovered the heterogeneity in ADSCs, in which CD200+ ADSCs presents as an alternative to conventional treatment of IBD.

「 P068 」

Clinical significance of thrombocyte and other parameters in elderly Ulcerative Colitis

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[Background] To study the clinical significance of thrombocyte and other parameters in patients with ulcerative colitis (UC) over 60 years old
[Methods] Thrombocyte related parameters and other clinical data of hospitalized patients diagnosed with UC in gastroenterology department of a Three-A hospital in Zhenjiang from January 2011 to November 2020 were collected. According to the age of onset was 60 years or older, the patients were divided into the elderly ulcerative colitis group (age 60 years or older, EOUC) and the non-elderly ulcerative colitis group (under 60 years of age, N-EOUC group). SPSS 22.0 software was used to analyze the two groups of data. Measurement data were expressed by mean ± standard deviation (x±SD), and comparison between groups was performed by t test. Spearman test was used for correlation analysis. $P < 0.05$ was considered statistically significant.
[Results] A total of 310 patients were included in the study, including 87 patients in the EOUC group, aged from 60 to 85 years old, with an average of 68.36±6.83 years old. In N-EOUC group, 223 patients ranged in age from 16 to 59 years, with an average of 41.04±11.54 years old, and there was no significant difference in gender composition between the two groups ($P >0.05$). Compared with N-EOUC group, EOUC group had lower mean platelet count (PLT) and thrombocytocrit (PCT), the differences were statistically significant ($P < 0.05$), and the PLT and PCT were positively correlated with the severity of the disease. The values of D-dimer and plasma fibrinogen (FIB) in EOUC group were higher than those in N-EOUC group, and the differences were statistically significant ($P < 0.05$). The values of D-dimer and FIB were positively correlated with the severity of the disease.
[Conclusion] The severity of disease in elderly UC patients was less severe than that in non-elderly patients. PLT, PCT, D-dimer and FIB were positively correlated with the severity of disease in elderly UC patients. Elderly patients with UC needs to be more vigilant about deep venous thrombosis.

「 P069 」

UCC: A Novel Model Predicting Short-term Outcomes in Patients with Acute Severe Ulcerative Colitis

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[Background] Early prediction of intravenous corticosteroid (IVCS) resistance in Acute severe ulcerative colitis (ASUC) patients is of great significance. We aimed to develop and validate a predictive model of short-term outcomes in patients with ASUC.
[Methods] We established a retrospective cohort of patients with ASUC in Peking Union Medical College Hospital from March 2012 to January 2020. Clinical, laboratory and endoscopic variables were collected and evaluated by the logistic regression and lasso regression. The primary and secondary outcomes were IVCS resistance and colectomy in 3 months, respectively. A predictive model incorporating the selected variables was built. Internal validity was confirmed with the bootstrap technique. External validation was conducted using data from an independent cohort of 65 ASUC patients in Shengjing Hospital of China Medical University.
[Results] A total of 129 patients were included in the derivation cohort. During index hospitalization, 102 (79.1%) responded to IVCS, and 27 (20.9%) failed; 18 (14.0%) patients underwent colectomy in 3 months, 6 received cyclosporin as rescue therapy, and two escalated to colectomy eventually; 5 succeeded with IFX as rescue therapy. Ulcerative Colitis Endoscopic Index of Severity (UCEIS; primary outcome OR=5.248, $p < 0.001$; secondary outcome OR=5.844, p=0.004), CMV infection (OR=3.913, p=0.037; OR=9.433, p=0.037), and CRP at day 3-8 (OR=1.054, p=0.001; OR=1.063, p=0.001) were independent predictors of IVCS resistance and colectomy in 3 months. These factors were incorporated in the UCC (UCEIS, CMV infection, and CRP) model. AUC of 0.878 and 0.738 was reached in the internal and external validation, respectively.
[Conclusion] UCC, a novel model predicting short-term outcomes in patients with ASUC, was established and validated. The model may aid in stratifying ASUC patients to guide management.

「 P070 」

Assessment Of Serum Cytokines And Clinical Features Predicts Endoscopic Score In Ulcerative Colitis Patients

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[Background] To analyze serum cytokines and clinical features in ulcerative colitis (UC) patients, and propose a novel prediction model of endoscopic activity, which are desired to reduce the frequency of endoscopic examinations and related costs.
[Methods] UC patients were retrospectively enrolled. The clinical features, laboratory, and endoscopic activity (Mayo Endoscopic Score, MES) were investigated and subjected to univariable and multivariable analyses. The final prediction model for differentiation between MES 0-1 (remission and mild) and MES 2-3 (moderate-to-severe) was developed by logistic regression analysis on the training set. The same discriminant function was tested on the validation set.
[Results] A total of 154 patients in Second Xiangya Hospital of Central South University were retrospectively enrolled in this cohort; 75 patients in clinical remission and 79 patients in moderate-to-severe inflammation. At endoscopy, 48.7% of patients in endoscopic remission or mild inflammation (MES 0-1)

and 51.3% had scores >1. In a multivariate model, variables independently associated with a MES >1 were stool frequency, pulse, hormones history, and albumin. The regression equations combining these four variables were developed for differentiating MES 0-1 and MES 2-3 patients. In the training data, the area under the receiver operating characteristic of equations was 0.934. The accuracy of regression equations for discrimination was 85.1% in the validation data.
[Conclusion] In UC patients, stool frequency, pulse, hormones history, and albumin can predict the probability of on-going endoscopic activity. These parameters could be used to identify patients who require further endoscopic examination and reduce the number of unnecessary invasive endoscopic procedures.

「 P071 」

Fibrotic of Colonic Wall in Patients with Ulcerative Colitis underwent a colectomy

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[Background] Intestinal fibrosis is consisered a common complication of inflammatory bowel disease [IBD] . There is rare evidence that a fibrotic rearrangement of the colon occurs in the later stages in ulcerative colitis[UC] . This is a prospective study aimed at examining the serum marker features(type III collagen and type IV collagen ） and histopathological of the colonic wall in both patients with active ulcerative colitis、ulcerative colitis in remission or ileocoanal anastomosis(IPAA) patients.
[Methods] Serum samples of mild [n =10]、moderate(n=10) and sever [n =10]UC patients with active disease were compared with ulcerative colitis in remission(n=10) and IPAA patients(n=10) to assess: types III and IV collagen,、white blood cell、erythrocyte sedimentation rate、procalcitonin 、IL-6、mayo score and MES sore.Surgical specimens were obtained from the most rigid part of the bowel and surgical controls were obtained 2cm beside the wall. Surgical specimens (n=10) compared with surgical control(n=10) to acess :parameters of fibrosis[type III collagen and type IV Collagen， fibronectin， RhoA,alpha-smooth muscle actin,desmin,vimentin] by western bolt and/or immunolabelling.
[Results] Serum sample showed type III collagen were significantly increased in IPAA patients compared with active ulcerative colitis or ulcerative colitis in remission ,however there was no significant difference between active ulcerative colitis and ulcerative colitis in remission.Colonic tissue from nidus showed increased collagen deposition was associated with an up-regulation of tissue fibrotic markers [collagen III, fibronectin, vimentin, RhoA] , along with a loss of elastic fibres, a rearrangement of the tunica muscularis towards a fibrotic phenotype.
[Conclusion] A significant increase of type III collagen in IPAA patients. A full-thickness angiogenesis is also evident in nidus in IPAA patients as compared with controls.

「 P072 」

The effectiveness and safety of cyclophosphamide for intestinal Behcet's disease

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[Background] Intestinal Behcet's disease (BD) patients often suffer from serious complications and have to undergo surgery if not treated in a timely and effective manner. However, the available medications are insufficient. This study was to compare the efficacy and safety of cyclophosphamide (CTX), thalidomide (THD) and biologic TNF-α inhibitors (TNFis) for intestinal BD.
[Methods] The medical records of intestinal BD patients at Peking Union Medical College Hospital from January 2004 to August 2020 were reviewed. Sixty-eight patients initially treated with CTX, THD or TNFis for more than 6 months were classified into four groups. Eighteen patients who used CTX or THD as non-first-line treatment were enrolled to observe the effectiveness compared with those patients using drugs mentioned before as first-line treatment. The DAIBD score was used to evaluate the clinical activity of the disease. Clinical remission rate, mucosal healing (MH) rate and adverse reaction rate were evaluated.
[Results] The 24-week clinical remission rates of the CTX group (n=12), THD group (n=37), CTX combined with THD group (n=12) and TNFis group (n=7) were 75.0%, 83.8%, 83.3% and 71.4%, respectively. The corresponding MH rates were 27.3%, 46.4%, 66.7% and 60.0%. The adverse reaction rates of the four groups were 33.3%, 45.9%, 41.7% and 14.3%, respectively. There were no significant differences in efficacy or adverse reaction rates among the four groups. The 24-week clinical remission rates of the CTX first-line treatment group and non-first-line treatment group were 75.0% and 33.3%, respectively (p=0.141). The 24-week clinical remission rates of the THD first-line treatment group and non-first-line treatment group were 83.8% and 83.3%, respectively (p=0.198).
[Conclusion] CTX was effective and well-tolerated in treating intestinal BD. The clinical remission rate of patients receiving CTX as first-line treatment is slightly higher than those as non-first-line treatment. CTX might be an effective first-line medication for intestinal BD.

「 P073 」

The rural incidence and prevalence of ulcerative colitis in China

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[Background] Ulcerative colitis (UC) is characterized by chronic relapsing continuous inflammation of colon and rectum. Protracted UC imposes a heavy social and economic burden. However, there is little attention on the epidemiology of UC in rural area. This study aim to investigate the rural incidence and prevalence of UC in China mainland.
[Methods] Data from January 2013 to December 2016 in the New rural cooperative medical insurance database was extracted. This study enrolled patients diagnosed as UC and calculated the incidence from 2014 to 2016 and the prevalence from 2013 to 2016.
[Results] The data of Beijing and Hainan Province were included. The crude incidence of UC from 2014 to 2016 were 0.58/100000, 0.91/100000 and 0.83/100000, respectively. The crude prevalence of UC from 2013 to 2016 were 0.68/100000, 1.27/100000, 2.27/100000 and 3.05/100000, respectively. The standardized incidence increased with age from 0.31/100000 in patients younger than 40 to 1.44/100000 in patients older than 65 in 2016. The crude prevalence in Beijing was higher than that in Hainan Province.
[Conclusion] The rural incidence of UC in China is lower than that in urban area, with variation in terms of age and region. However, it is climbing due to the urbanization of rural area.

「 P074 」

Composition of mucous microbiota in ulcerative colitis depending on endoscopic activity

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[Background] To determine if there is a change in the composition of mucous microbiota in patients with ulcerative colitis depending on endoscopic activity
[Methods] We included 70 patients with ulcerative colitis in our study. The median age was 40±14.4 years (range 18-69). 43 were female (61.4%), 27 – male (38.6%). Extensive colitis was found in 78.6% cases (n=55), left-sided colitis – 21.4%(n=15). Endoscopic disease activity based on the Schroeder classification: inactive – 18 (25.7%), mild – 31 (44.3%), moderate – 18 (25.7%), severe – 3 (4.3%) patients. 50 non-IBD patients were included in the control group. Mucosal biopsies were collected for each participant immediately frozen until analysis. Real-time polymerase chain reaction (RT-PCR) was conducted to evaluate the composition of the gut microbiome. Analysis was completed including the non-parametric Mann-Whitney test, with $p<0.05$ deemed to be indicative of statistical significance.
[Results] Using RT-PCR, in biopsies microorganisms were arranged as follows, depending on the prevalence of the phylotype: Firmicutes (26.40) – Bacteroidetes (13.54) – Proteobacteria (9.76) – Actinobacteria (5.64) – Fusobacteriaceae (1.04) – Verrucomicrobia (0.60) lg equivalent genome/sample. The microbial composition in inactive of the inflammatory process is more diverse in comparison with mild and moderate activity ($p<0.05$). The amount of Clostridium leptum group, Streptococcus spp and Clostridium coccoides group was significantly reduced in remission when compared with the mild activity ($p<0.05$). Bacteroides spp increases with increasing disease endoscopic activity ($p<0.05$). Also, with an increase in the endoscopic activity of inflammation, the number of Erysipelotrichaceae significantly decreases ($p<0.05$). No significant differences were found for the rest of the bacteria.
[Conclusion] Consequently, the composition of the microbiota changes depending on the endoscopic activity. Bacteroides spp can be considered a biomarker for inflammation.

「 P075 」

Stringent screening strategy significantly reduces reactivation rate of tuberculosis in patients with inflammatory bowel disease on anti TNF therapy in a TB endemic region

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[Background] Background/Aim: Anti-tumour necrosis factor (anti-TNF) therapy use in patients with inflammatory bowel disease (IBD) leads to increased risk of tuberculosis (TB) reactivation despite LTB screening, especially in TB endemic regions. We evaluated the effect of stringent screening strategy and latent tuberculosis (LTB) prophylaxis on TB reactivation.
[Methods] Methods: We performed an ambispective comparison between patients who were started on anti-TNF therapy after January 2019(Cohort A) and between Jan 2005-Jan 2019(Cohort B). Cohort A patients were subjected to stringent screening criteria which included all: history of past TB/recent contact with active TB, CT chest, IGRA (interferon gamma release assay), TST (tuberculin skin test) and if any positive were given chemoprophylaxis. A cohort comparison was done to evaluate for risk reduction of TB following the stringent screening strategy.
[Results] Results: One hundred seventy one patients (63-Ulcerative colitis/108-Crohn's disease; mean age diagnosis-28.5±13.4 years; 60% males; median follow-up duration after anti-TNF:33months [interquartile range, 23–57 months]) were included. Among 112 in Cohort B 22(19.6%) had LTB and 19(17%) developed TB. In comparison, 26(44%) had LTB and only 1(1.7%) developed TB in Cohort A($p<0.01$). On survival analysis, patients in Cohort B had a higher probability of TB reactivation compared to Cohort A at 5 year of follow up, HR-14.39 (95% CI,1.88- 109.81[p=0.010]) after adjusting for gender, age at anti-TNF therapy initiation, concomitant immunosuppression, total number of anti-TNF doses and therapy escalation.
[Conclusion] Conclusion: The high risk of TB reactivation with anti TNF therapy in TB endemic regions can be significantly mitigated with stringent LTB screening and chemoprophylaxis.

「 P076 」

The function and mechanism of long non-coding RNA TNFRSF10A-AS1 in colorectal cancer

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[Background] Emerging studies recently have emphasized the biological functions of ncRNAs in colorectal cancer, especially miRNAs and lncRNAs. Our previous study found that lncRNA TNFRSF10A-AS1 was upregulated in gastric cancer, and functional experiments showed that it might act as an oncogene, and mainly localized in the cytoplasm of gastric cancer cells. However, the expression, function and mechanism of TNFRSF10A-AS1 in colorectal cancer remain unclear.
[Methods] The expression level of TNFRSF10A-AS1 were detected by quantitative real-time PCR in colorectal cancer tissues and cell lines and analyzed its relationship with clinicopathological features. Then, the effects of TNFRSF10A-AS1 on tumor growth and metastasis in colorectal cancer were studied in vitro and in vivo experiments. Mechanistically, given that we previously found TNFRSF10A-AS1 mainly localized in the cytoplasm of gastric cancer cell lines, we mainly focused on its function as a miRNA sponge to further explore its underlying mechanism.
[Results] TNFRSF10A-AS1 was upregulated in both colorectal cancer tissues and cell lines and was positively associated with T grade and tumor size in colorectal cancer patients. Functionally, reducing the expression of TNFRSF10A-AS1 significantly inhibited the proliferation, migration and invasion of colorectal cancer cell lines both in vitro and in vivo, whereas miR-3121-3p inhibitor counteracted these effects. Mechanistic analysis demonstrated that TNFRSF10A-AS1 functioned as a sponge of miR-3121-3p and upregulated the expression of HuR to promote tumorigenesis and progression of colorectal cancer.
[Conclusion] TNFRSF10A-AS1 functions as an oncogene through the miR-3121-3p/HuR axis in colorectal cancer, which has provided a potential biomarker and therapeutic target for colorectal cancer patients.

「 P077 」

Evaluation of Nutritional Status in Patients with IBD

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[Background] Inflammatory bowel disease (IBD) is associated with an increased risk of malnutrition and sarcopenia. There is paucity of data on the nutritional status of patients with IBD from Asia.
[Methods] This is a single centre cross-sectional analysis of adult patients with IBD [ulcerative colitis (UC) and Crohn's disease (CD)]who underwent anthropometry [body mass index (BMI), mid upper arm circumference (MUAC) and triceps fold thickness (TSF)] , body composition analysis [fat mass, lean mass, fat mass index (FMI) and fat free mass index (FFMI)]and assessment for sarcopenia [handgrip strength and skeletal muscle index (SMI) at L3 vertebral level)]at a tertiary care centre in north India. Age and gender matched healthy adults served as

controls. The European Society of Clinical Nutrition and Metabolism (ESPEN) criteria was used to define malnutrition.
[Results] A total of 406 patients [336 (82.76%) UC and 70 (17.24%) CD; mean age 40.56 ± 13.67 years; 215 (52.95%) males]with IBD and 100 healthy controls (mean age 38.69 ± 10.90 years; 56 (56%) males) were enrolled; of which 102 (25.12%) patients with IBD were malnourished. The mean BMI, MUAC and TSF thickness were lower in patients with IBD compared to controls (23.32±4.82 kg/m2, 25.59±3.83 cm and 13.21±6.84 mm vs 24.92±3.74 kg/m2, 27.70±3.25 cm and 21.36±7.74 mm; p=0.002, <0.0001 and <0.0001 respectively). Patients with IBD had lower fat and lean mass compared to controls (19.04±8.28 kg vs 20.92±6.46 kg; p=0.04 and 43.44±9.79 kg vs 47.18±8.53 kg; p<0.0001). The controls had greater mean handgrip strength and L3 SMI. No significant differences in nutritional status indices were observed between UC and CD patients.
[Conclusion] Malnutrition and sarcopenia are common in both UC and CD patients compared to healthy controls.

「 P078 」

ITPA polymorphisms do not predict additional risk beyond TPMT and NUDT15 for thiopurine induced cytopenia in inflammatory bowel disease

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[Background] The role of inosine triphosphate pyrophosphatase (ITPA) polymorphisms in patients with inflammatory bowel disease (IBD) on thiopurine is unknown in the South Asian population. We studied ITPA polymorphisms in patients with leukopenia unexplained by the thiopurine methyltransferase (TPMT) and Nucleoside diphosphate-associated moiety X type motif 15 (NUDT15) polymorphisms.
[Methods] We prospectively included consecutive IBD patients on thiopurines (azathioprine or 6-mercapto-purine) from January 2019- March 2020 in a tertiary care centre. Estimation of ITPA (C.94C>A) polymorphism was done for association with thiopurine induced leukopenia(total leucocyte count <3000 per mm3).
[Results] Leukopenia occurred in 33 patients (of a total 119 patients). Of them eight patients with TPMT (n=1) or NUDT15 (n=7) polymorphisms were excluded. Among the remaining 111 patients (mean age: 36.36 ± 13.54 years and 57 [51.3%]males), 25 patients (21.01%) had unexplained leukopenia. ITPA polymorphism was seen in 4 (16%) patients from 25 patients who had leukopenia. And from remaining patients who had no leukopenia with thiopurines, 24 (27.9%) of them had ITPA polymorphisms (p value =0.228). The odd's ratio of prediction of occurrence of leukopenia with ITPA mutation is 0.4921 (95% CI, 0.1520-1.5830, p value=0.234).
[Conclusion] ITPA (C.94C>A) polymorphisms were not found to be predictive of occurrence of leukopenia with thiopurines in patients of IBD.

「 P079 」

The role of Pelvic MRI-Based Score in Assessing the Severity and Follow-up of Patients With Crohn's Perianal Fistulas

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[Background] The radiologic healing of perianal fistulizing Crohn disease (PfCD) is slower than clinical healing. Contrast-enhanced pelvic magnetic resonance imaging (MRI) is the radiologic study of choice used to diagnose PfCD. The aim was to study the accuracy of Pelvic MRI-Based Score (Van Assche score) in Assessing the Severity and Follow-up of PfCD.
[Methods] We performed a retrospective, single-centre study of patients with PfCD who underwent contrast-enhanced MRI of the pelvis before and after treatment initiation with infliximab or perianal surgery, between January 2010 and September 2020. The demographic profile, clinical status, and laboratory data of the patients at the time of each MRI examination were noted. Meanwhile, the Perianal Crohn Disease Activity Index (PCDAI) and the Fistula Drainage Activity Index (FDAI) were assessed. The association between the Van Assche score and the cumulative probability of relapse during follow-up was tested combining Kaplan-Meier curves and log-rank testing.
[Results]A total of 48 patients were included. The Van Assche score correlated well with PDAI and FDAI [r = 0.61 for PDAI and r = 0.60 for FDAI] . The Van Assche score ≤12 detected cilinal improvement with an area under the receiver operating characteristic curve [AUROC]of 0.81 (95% confidence interval [CI]0.63–0.92, p <0.0001). The Van Assche score ≤12 after treatment initiation was associated with a lower cumulative probability of Anal fistula lower recurrence rate (p = 0.0223, median [interquartile range: IQR]follow-up 2.1 [0.8–3.7]years).
[Conclusion]In Patients With Crohn's Perianal Fistulas, the Van Assche score accurately detects Severity and treatment response, the latter associated with a lower recurrence rate

「 P080 」

The role of Akkermansia muciniphila in protecting against Dextran Sulfate Sodium induced colitis

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[Background] Akkermansia muciniphila (A.muciniphila) plays an important role in metabolic and psychiatric disorders. The aim of our study was to investigate whether A. muciniphila has a therapeutic effect on colitis and the potential mechanism.
[Methods] The change of weight, disease activity index (DAI) and histological activity index (HAI) was used to evaluate the colitis severity and the therapeutic effect of A. muciniphila in DSS-induced colitis mice models. 16S rDNA sequencing was used to evaluate the gut microbiota dysbiosis. Flow cytometric analysis was used to determine the subsets of T cells in lamina propria and mesenteric lymph nodes. Qualitative and quantitative analyses of A. muciniphila metabolites were performed by Liquid Chromatography-Mass Spectrometry (LC-MS) in A. muciniphila and Ctrl groups to screen out differential metabolites which may have anti-inflammatory effects.
[Results] The change of weight (P = 0.035), DAI (P = 0.000065) and HAI (P = 0.0000006) was higher in Acute-Ctrl group compared with Acute-Akk group. 16S rDNA sequencing showed that A. muciniphila had improved the gut microbiota dysbiosis in Acute-Akk group. In Acute-Akk group, the proportion of Th17 was lower in both lamina propria mononuclear cells (P = 0.001) and in mesenteric lymph nodes (P = 0.019). However, the proportion of Treg was higher in both lamina propria mononuclear cells (P = 0.000013) and in mesenteric lymph nodes (P = 0.019). A total of 66 differential metabolites were found between Akk group and Ctrl group, of which 33 metabolites including propionic acid, tryptophan, 5-Hydroxytryptophol and N-acetylneuraminic acid were up-regulated in A. muciniphila culture medium.
[Conclusion] A. muciniphila and the metabolites of A. muciniphila could improve DSS-induced colitis and the gut microbiota dysbiosis by regulating the balance of Treg/Th17 probably. The metabolites including propionic acid, tryptophan, 5-Hydroxytryptophol and N-acetylneuraminic acid may have a positive effect on inflammatory diseases.

「 P081 」

Serum procalcitonin as a prognostic marker in acute severe ulcerative colitis: A prospective study

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[Background] Procalcitonin can increase in active ulcerative colitis. We investigated the role of procalcitonin in predicting response in patients with acute severe ulcerative colitis (ASUC).
[Methods] Patients with ASUC were enrolled. Serum procalcitonin was measured on admission and

day three of steroid therapy. Association between procalcitonin and response on day three as well as between procalcitonin and need for second line therapy was assessed.
[Results] Fifty patients (23 males, mean age: 35.98 ±13.8 years) assessed. No response by day 3 in sixteen, ten patients eventually required second line therapy. Baseline procalcitonin was significantly associated with response on day three (p=0.016). There was no association between day one or day three procalcitonin and need for second-line rescue therapy.
[Conclusion] Serial procalcitonin is not an effective biomarker for predicting outcomes or need for second line therapy in ASUC.

「P082」

The efficacy and safety of anti-TNF agents in the treatment of Intestinal Behcet's disease， a systematic review and meta-analysis

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[Background] Behcet's disease was a systemic vasculitis which could involve gastrointestinal tract. This is a systematic review and meta-analysis evaluating the efficacy and safety of anti-TNF agents in treating patients with intestinal Behcet's disease.
[Methods] We conducted searches on PubMed, Embase, Cochrane. Data from eligible studies was used to calculate the pooled estimate of proportions of clinical remission, mucosal healing at week 14, 30,54 and 100, as well as the pooled incidence of adverse drug reactions. Meanwhile, subgroup analysis based on the specific type of anti-TNF agents was performed.
[Results] Of the 828 studies initially identified, 13 were included finally, all of which were single-arm cohort studies(Figure 1). The pooled proportions of clinical remission at week 14, 30, 54 and 100 were 0.61(95%CI 0.48-0.78), 0.51(95%CI 0.40-0.66), 0.57(95%CI 0.48-0.67), and 0.38(95%CI 0.16-0.88), respectively(Figure 2). The pooled proportions of mucosal healing at week 14, 30, 54 and 100 were 0.66(95%CI 0.50-0.86), 0.82(95%CI 0.48-0.98), 0.65(95%CI 0.51-0.81), and 0.69(95%CI 0.39-1.00), respectively(Figure 3). The pooled estimate of proportion of overall adverse drug reaction for infliximab was 0.22(95%CI 0.07-0.69).
[Conclusion] Anti-TNF agents, including infliximab, adalimumab, was an efficient therapy for intestinal Behcet's disease. The safety of anti-TNF agents used in treatment of intestinal Behcet's disease was acceptable.

「P083」

Spicy food is the top one diet risk factor for the relapse and exacerbation of Inflammatory bowel disease

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[Background] Diet is a key environment factor for the development of the inflammatory bowel disease (IBD). This study aimed to investigate whether an inappropriate die could trigger an active disease or exacerbate their symptoms.
[Methods] We developed a questionnaire to explore which dietary habits could be associated with the disease relapse and exacerbation in IBD patients. The chronic colitis mice were induced by dextran sulphate sodium (DSS) and then were orally administrated with capsaicin. Disease activity index (DAI) and cytokines (IL-1 beta, IL-6 and TNF alpha) were applied to assess the colitis.
[Results] A total of 306 participants completed the survey, 39% (n=118) had Crohn's disease and 61% (n=188) had ulcerative colitis. Raw food, oily food and milk were also frequently reported to exacerbate symptoms (Fig 1a). Around 54% patients reported that spicy food could be the top one risk factor for the relapse. An exacerbation of symptoms with spicy food was reported by 42% (Fig 1b). In DSS mice model, the DAI score and inflammatory factor level in the experimental group were both higher than those in the control group after capsaicin administration.
[Conclusion] This study found that certain dietary factors pertained to the symptom exacerbation including spicy food, raw food, and milk. Spicy food was the top one risk factor for the disease relapse and exacerbation.

「P084」

Regulating effect of mitochondrial ribosomal protein S18B on inflammatory bowel disease by respiratory chain

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[Background] Accumulating evidence suggests inflammatory bowel disease (IBD) is a chronic inflammatory disorder with mitochondrial dysfunction. The level of Interleukin-6(IL-6) is higher in IBD patients than that in healthy controls and IL-6 promotes phosphorylation of signal transducers and activators of transcription 3(STAT3). Mitochondrial Ribosomal Protein S18B（MRPS18B） is related to the pathways associated with mitochondrial translation and respiratory chain. Previous studies showed MRPS18B is one of the target genes of STAT3. We would explore whether MRPS18B play a role in IBD.
[Methods] The morphological structure of mitochondria in human intestinal tissue was observed by transmission electron microscope. Intestinal cell line NCM460 was constructed into MRPS18B-overexpressing system by CRISPR-Cas9. MRPS18B, Cytochrome C Oxidase Subunit IV (COX IV) and component of mitochondrial respiratory chain complex were detected by western-blot and immunofluorescence staining. Reactive oxygen species (ROS) was detected by mitosox staining.
[Results] At the site of lesion in IBD patients, cristae of mitochondria are shorter, and are arranged loosely. Expression of COX IV and MRPS18B was higher in IBD patients than that in healthy persons, and expression of IL-6 is also higher in IBD patients. In NCM460, IL-6 promoted phosphorylation of STAT3 and expression of MRPS18B. In NCM460, when MRPS18B overexpressed, expression of component of respiratory chain complex were changed. Expression of Mitochondrially Encoded Cytochrome C Oxidase II (MT-CO2) was decreased. Expression of Elongation Factor Tu (TUFM), Cytochrome C Oxidase Subunit 7A-Related Protein (COX7A2L) and Ubiquinol-Cytochrome C Reductase Core Protein II(UQCRC2) were increased. Production of ROS in MRPS18B-overexpressing cells is more than that in NCM460.
[Conclusion] Our study shows that MRPS18B redundancy significantly leads to mitochondrial dysfunction at the lesion sites of IBD patients, most possibly by respiratory chain. These findings inaugurate the pathogenicity of MRPS18B-mediated intestinal activation in IBD and open new avenues for treatment of this disease.

「P085」

The intestinal parasitic infections in patients with inflammatory bowel disease

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[Background] Gastrointestinal infections are related with the occurrence and recurrence of IBD. However, the association between intestinal parasitic infections and IBD patients has not been full studied. The aim of this study was to investigate the prevalence of enteric parasitic infections in IBD patients and

analyze the characteristics of parasitic infections in patients with IBD.
[Methods]IBD patients with fecal parasitic examinations, presenting to West China Hospital of Sichuan University from September 2014 to July 2019, were reviewed retrospectively. Parasites of stool samples were examined by microscope. Baseline characteristics and clinical outcomes were recorded. Finally, the infection rate of parasites in IBD patients and characteristics of IBD patients with parasitic infections were analyzed.
[Results] A total of 64 patients with IBD, including 33 ulcerative colitis (UC) and 31 Crohn's disease (CD), were enrolled in this study. The positive rate of intestinal parasitic infections in patients of IBD was 51.56%, while in UC subgroup and CD subgroup were 60.61% and 41.94%, respectively. All detected parasites were protozoa, among which amoeba was predominant. Variables analysis found that IBD patients with parasitic infections had higher levels of platelet (PLT)(P= 0.025), C-reactive protein (CRP)(P= 0.009) and erythrocyte sedimentation rate (ESR)(P=0.027). The increases of these inflammation markers indicated the influence of parasites on disease severity of IBD.
[Conclusion] The incidence of intestinal parasites infections in IBD patients was pretty high and these infestations positively related to severity of inflammation and disease in IBD patients.

「P086」

Epstein–Barr Virus Contributing to the Differential Diagnosis of Primary Intestinal Epstein–Barr Virus-associated Lymphoproliferative Disorders and Crohn's Disease

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[Background] Primary intestinal Epstein–Barr virus (EBV)-associated lymphoproliferative disorders (PIEBV+LPDs) are a group of diseases with predominantly digestive symptoms and GI lesions. PIEBV+LPDs are difficult to distinguish from Crohn's disease (CD) in clinical practice due to overlapping clinicopathological characteristics, particularly when CD patients are infected with EBV. It remains unclear about EBV gene polymorphisms in the two diseases. Hence, the objectives of this study were to analyze the clinical differences between PIEBV+LPDs and CD with EBV infection, and explore the EBV gene polymorphisms in the two diseases.
[Methods] The clinical characteristics of 27 CD patients positive for EBV DNA in peripheral blood were retrospectively compared with 22 PIEBV+LPDs patients in West China hospital. Meanwhile, the gene polymorphisms of EBV-encoded small RNAs (EBER) were furthermore analyzed by DNA sequencing in 21 CD patients with EBV infection and 15 patients with PIEBV+LPDs.
[Results] Significant differences were found between CD patients with EBV infection and patients with PIEBV+LPDs in terms of fever (P < 0.001), anemia (P=0.003), thrombocytopenia (P=0.014), increased GGT (P=0.016), and hypofibrinogenemia (P=0.036), but not for gender, age, etc. Besides, PIEBV+LPD group had more patients with EBV-DNA load > 102 copies/mL than CD group (P < 0.001) in this study. after analyzing gene polymorphisms of EBV, we only found EB-6m subtype of EBER gene in the two groups, while it was noteworthy that the proportion of non-common mutations of the EB-6m subtype in patients with PIEBV+LPDs was significantly higher than in patients with CD (P=0.003).
[Conclusion] Serum EBV-DNA load is helpful to differentiate PIEBV+LPDs and CD, and sequencing studies of EBV genome in the two diseases may lead to a better understanding of their discrepancies.

e-POSTER

「P087」

Azathiopurine-induced Leukopenia and Evaluation of Therapeutic Effects of Diyushengbai Tablet in Patients with Cohn's Disease

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[Background] Azathiopurine (AZA) is the first-line immunosuppressant for crohn's disease (CD). The incidence of azathiopurine-induced leukopenia (AIL) in Asians is high, while the trends of leukocyte counts are unclear. Diyushengbai tablet is a synthetic traditional Chinese medicine, widely used to prevent and treat leukopenia caused by chemotherapy. However, its role in treating AIL is unidentified. Therefore, the objectives of this study are to analyze the trends of leukocyte counts in CD patients on AZA, and explore the effects of Diyushengbai tablet in the treatment of AIL.
[Methods] This study retrospectively analyzed the clinical data of 62 patients with CD. The trend charts of leukocyte counts were plotted, and the therapeutic effects of Diyushengbai tablet on patients with leukopenia were evaluated.
[Results] We analyzed the trends of leukocyte counts in 48 patients with CD. The leukocyte counts in patients on concomitant therapy (AZA and glucocorticoid, GC) were more likely to present upward trends in comparison with those without GC treatment (30.4% vs. 85.7%, P=0.001) (Figure 1). Besides, the leukocyte counts in the two groups were at the lowest level within 12-28 weeks and 6-28 weeks, respectively. 33 subjects were involved in the analysis of the effects of Diyushengbai tablet in the treatment of AIL. Diyushengbai tablet could increase the leukocyte count, and prevent more than 90% of patients from withholding AZA. Diyushengbai tablet treatment could maintain the leukocyte counts at around 3.81±0.94×109/L, and the leukocyte counts were no less than 3.0×109/L in 87.9% of patients (Figure 2).
[Conclusion] The leukocyte counts in patients on concomitant therapy were more likely to increase in comparison with those without GC treatment. The leukocyte counts in the two group of patients were at the lowest level within 12-28 weeks and 6-28 weeks, respectively. Adjusting the examination time and frequency should be considered in these patients. Diyushengbai tablet could be used to treat AIL. It could keep the leukocyte counts no less than 3.0×109/L in 87.9% of patients, and prevent most patients with AIL from withholding AZA.

「P088」

Lactic Acid-Producing Probiotic Saccharomyces Cerevisiae Attenuates Ulcerative Colitis via Suppressing Macrophage Pyroptosis and Modulating Gut Microbiota

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[Background] Dysbiosis and dysimmunity have been described in ulcerative colitis (UC). Macrophage pyroptosis affects intestinal immunity and barrier in UC. Lactic acid being a metabolic substrate has been re-recognized as an active signal in regulatory immune cells functions. However, UC patients has decreased levels of lactic acid in the intestinal mucosa and feces. Applying synthetic methods to engineer Saccharomyces Cerevisiae can enhance the lactic acid productivity. This study aims to explore the therapeutic effect of lactic acid-producing engineered Saccharomyces Cerevisiae on ulcerative colitis by regulating macrophage pyroptosis and elucidate its potential mechanism.
[Methods] A dextran sodium sulfate(DSS)-induced acute colitis model in mice was established and a SyBE strain was used for intervention. RAW264.7 cells were transfected by MCT1 shRNA and stimulated by lipopolysaccharide (LPS), nigericin and/or lactic acid. Western blot, flow cytometry and other methods were used to evaluate the effects of lactic acid on the pyroptosis, polarization and related indicators in RAW264.7 cells or mice intestinal macrophage.
[Results] Firstly, the synthetic biology method was used to transform Saccharomyces cerevisiae (S. cere-

visiae) BY4741 to obtain a lactic acid probiotic-SyBE strain with higher lactic acid productivity. In vivo, lactic acid and SyBE improved body weight and colon length, reduced disease activity index, histological score, and serum levels of TNF-α, IL-6 and IL-1β in DSS-treated mice. Besides, immunohistochemistry and immunofluorescence showed more MUC2 and ZO-1 indicating improved goblet cell and gut barrier. Immunofluorescence detecting F4/80 and CD206 revealed intestinal macrophages changed from M1 to M2. Furtherly, lactic acid promoted macrophage phagocytosis by measuring the phagocytosis of FITC-latex beads into the cells. Analyzing pyroptosis protein in colon showed reduced NLRP3 expression in probiotic group, along with lower caspase-11 but not caspase-1 in upstream pathway. Further exploring its downstream pathway revealed Gasdermin-D and IL-1β expression were reduced, indicating the regulatory mechanism of lactic acid relied on the caspase-11-mediated non-classical pyroptosis pathway. Lactic acid also inhibited these proteins in RAW264.7 macrophages stimulated by LPS and Nigericin, and the inhibitory role diminished when MCT1 was knocked out. Lactic acid Moreover, lactic acid affected the macrophage polarization with lower iNOS and higher Arg-1 gene expression, along with less CD86+ cells and more CD206+ cells detected by flow cytometry. Similarly, the regulation effect of lactic acid on cell polarization was diminished which MCT1.Finally, lactic acid suppressed interactions STAT1 and NLRP3 with increased histone acetylation H3K9 and histone lactylation H3K18. Finally, lactic acid probiotics reshaped the intestinal microbiota with increased bacterial diversity and beneficial bacterium， and also increased the contents of short chain fatty acids.
[Conclusion] This article aims to evaluate an engineered lactic acid-producing yeast with high production regulating the intestinal microbiota and reducing the excessive activation of macrophages pyroptosis to prevent colitis. We infer that using lactic acid as a driving factor will develop strategies to control the potential consequences of microbiota dysbiosis during intestinal inflammation, such as the deterioration of mucosal inflammation, and provide new ideas and evidence for the use of probiotics to treat UC.

⌈ P089 ⌋

The microbiome profile in ulcerative colitis and pouchitis

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[Background] Pouchitis, experienced by patients with ulcerative colitis(UC) who undergo total colorectal resection and ileal pouch-anal anastomosis(IPAA), is generally regarded as an inflammatory bowel disease(IBD). Our aim was to determine the bacterial composition in ulcerative colitis and pouchitis, and explore the potential pathogenesis.
[Methods] 85 participants were enrolled in this cross-sectional study(37 UC, 15 healthy UC pouches, 15 pouchitis, 18 healthy volunteers). Patients with UC or ulcerative colitis-pouch were divided into different subgroups according to the modified Mayo score and the pouchitis disease activity index(PDAI). Stool samples were collected, and microbial populations were analyzed by pyrosequencing of 16S ribosomal DNA. The function of bacteria was predicted by Phylogenetic Investigation of Communities by Reconstruction of Unobserved States (PICRUSt) and PICRUSt2.
[Results] Compared to healthy control, increased degree of UC was accompanied by decline of microbial α-diversity and the decrease of butyrate-producing bacteria and Bacteroides. Pouchitis showed the bloom of Escherichia-Shigella, Ruminococcus_gnavus and the decrease of Faecalibacterium and Bacteroides. The α-diversity of intestinal microorganisms in pouchitis and ulcerative colitis is similar, but the β-diversity is different. Escherichia-Shigella, Ruminococcus gnavus, and Clostridium sensu stricto were more abundant in the pouchitis group compared to active UC group. PICRUSt and PICRUSt2 anlysis showed the intestinal microbiota riched in pouchitis related to multiple infection pathways.
[Conclusion] The characteristics of intestinal microbiota disturbance in ulcerative colitis and pouchitis are different. These findings suggest different microbial pathogenic mechanisms exist in ulcerative colitis and pouchitis.

⌈ P090 ⌋

Changes of medical treatment in inflammatory bowel disease: a single center study in 2010-2019 in China

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[Background] The incidence rate of inflammatory bowel disease in China is increasing year by year, and the choice of medical treatment is various. The trend of medical treatment in Chinese inflammatory bowel disease patients is not clear.
[Methods] Retrospective data in the northwest inflammatory bowel disease center of China, Xijing Hospital inflammatory bowel disease center was studied. The trend of medical treatment was studied from the database and analyzed by Statistical Product and Service Solutions 23.0 software. All the tests were bilateral, P<0.05 showed that the difference between the groups was statistically significant.
[Results] The data of inflammatory bowel disease patients (ulcerative colitis: 1425 cases; Crohn's disease: 304 cases) diagnosed in Xijing inflammatory bowel disease center were retrospectively studied. Compared with 2010-2014, the number of ulcerative colitis cases increased significantly (1056 cases vs. 369 cases, P < 0.05), and the number of Crohn's disease patients increased significantly (211 cases vs. 93 cases, P < 0.05) as well. The number of ulcerative colitis patients was significantly higher than that of Crohn's disease patients. Although the use of immunosuppressants and biological agents has gradually increased in recent years, the overall use of 5-aminosalicylic acid in Xijing inflammatory bowel disease center accounted for more than 90% for the medical treatment. The utilization rate of immunosuppressants in 2015-2019 was 89/1056(8.4%), which was significantly higher than that in 2010-2014 (9/369, 2.4%) (P < 0.001), and the utilization rate of biological agents in 2015-2019 was 51/1056(4.8%) compared with that in 2010-2014(2/369, 0.5%) (P < 0.001). The utilization rate of 5-aminosalicylic acid (1022/1056, 96.8%) in 2015-2019 was significantly higher than that in 2010-2014 (332/369, 90.0%P < 0.001). Similarly, use of steroid in 2015-2019 (316/1056, 29.9%) was higher than that in 2010-2014 (54/369, 14.6%) (P < 0.001). For male and female patients of different gender, as well as ulcerative colitis or Crohn's disease patients aged less than 40 years or older than 40 years old, the medication treatment trend is also different.
[Conclusion] The use of immunosuppressive and biological agents is increasing gradually, while 5-aminosalicylic acid still remains most widely used in inflammatory bowel disease patients in China. The medical treatment of inflammatory bowel disease patients in China will change in the further with the improvement of understanding of inflammatory bowel disease, the emergence of new biological agents as well as small molecule drugs, and the promotion of China's medical insurance policy.

⌈ P091 ⌋

Medication Belief is associated with improved Adherence to Exclusive Enteral Nutrition in Patients with Crohn's Disease

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[Background] Background: The prevalence of Crohn's disease (CD) has been increasing rapidly in China and the role of exclusive enteral nutrition (EEN) in the management of adult patients with active CD is evolving. Adherence is a key factor in the effective treatment of many chronic diseases. Aim: The aim of this study was to assess adherence to EEN of CD patients and to evaluate the relationship between medication belief and EEN adherence.
[Methods] A cross-sectional study was conducted, demographic information, adherence to EEN, and beliefs about EEN were investigated. Medication belief was measured using the Beliefs about Medicines Questionnaire (BMQ)-Specific.
[Results] In all, 131 CD patients completed the questionnaire and were enrolled in this study. The high adherence rate was 73.3% (96 of 131 patients), and we found that medication belief, residency, medical

insurance, and history of enteral nutrition therapy were factors affecting EEN adherence. More patients with a high BMQ score had high adherence to EEN (n = 54, 56.2%) compared to those with a low BMQ (n = 42, 43.8%). Moreover, price, taste, storage method, portability, and purchase convenience of EEN were not associated with adherence.
[Conclusion] The adherence to EEN among patients with CD is relatively high, and is related to medication belief, residency and history of enteral nutrition. The type of enteral nutrition, taste, storage, and convenience of purchase were not associated with EEN adherence. Future study is warranted to explore the possible role of improving patients' beliefs in increasing adherence.

「P092」

Development of a CT enterography index for evaluation of disease activity in patients with ileocolonic Crohn's disease

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[Background] CT enterography (CTE) is used routinely for assessment of activity and severity in ileocolonic Crohn's disease (CD), but there are few well validated CTE scoring systems. The aim of this study was to develop a quantitative CTE scoring system for ileocolonic Crohn's disease activity.
[Methods] Forty-nine CD patients with ileocolonic involvement were retrospectively included between March 2015 and May 2018. All patients underwent CTE and ileocolonoscopy. Mural hyperenhancement and mural thickening at CTE were scored quantitatively, while mural stratification, submucosal fat deposition, comb sign, perienteric fat hypertrophy and mesenteric fibrofatty proliferation were qualitative variables. A Tobit regression model was applied for assessing the association between Crohn's disease endoscopic index of severity (CDEIS) and CTE variables.
[Results] A total of 280 intestinal segments were evaluated. Independent predictors for CDEIS were mural thickness (p=0.000), mural stratification (p = 0.000) and comb sign (p = 0.002). In order to quantify disease activity based on CTE findings in each segment, a simplified CT enterography index of activity (CTEIA) was derived from logistic regression analysis. There was a high and significant correlation coefficient between CDEIS and CTEIA (r = 0.779, p=0.000) for per-segment analysis. The model for the detection of ulcerative lesions in the colon and terminal ileum achieved an area under the receiver-operating curve of 0.901 using a cut-off point of 6.25.
[Conclusion] CTEIA is a new, qualitative and accurate tool for evaluation of ileocolonic Crohn's disease.

「P093」

Antibiotic-Modulated Microbiota Suppresses Colon Inflammation in Mice by Modulating the Intestinal Bile Acids Metabolism

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[Background] Antibiotics could affect the metabolism of secondary bile acid, the co-metabolites of host and gut bacteria, by regulating intestinal microbiota. In this study, we aimed to investigate the role of antibiotics-modulated bile acid metabolism during the formation of DSS-induced intestinal inflammation.
[Methods] We performed metabolomics, microbiome, and metagenomics profiling of stool from normal and DSS-colitis mice with or without different antibiotics administration. The antibiotics restrained the formation of intestinal inflammation of mice induced by DSS.
[Results] The results of the metabolomic showed the structure of bile acid in each group of mice was significantly different. Multivariate analysis found that lithocholic acid (LCA) was the key bile acid affecting intestinal inflammation. The concentration of LCA in the feces of colitis mice administrated with antibiotics was significantly lower than that of DSS-colitis mice without antibiotics treatment. Further experiments confirmed that supplementing LCA could reverse the inhibitory effect of antibiotics on the formation of colitis in mice by sphingosine-1-phosphate receptor 2 (S1PR2)-NF-κB pathway. Microbiome profiling showed that bacterial genera increased in DSS-colitis mice, and its relative abundance was positively correlated with the intestinal LCA level. Antibiotics could reduce the relative abundance of these LCA positively related bacteria to a normal level.
[Conclusion] Our results showed that antibiotics could inhibit the development of intestinal inflammation by modulating the pro-inflammatory bile acid LCA. The LCA and its positively related bacteria might be used as an intervention target to inhibit colon inflammation.

「P094」

A Convolutional Neural Network-Based Endoscopic Images Diagnosis System Classifying Crohn's Disease and Ulcerative Colitis

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[Background] Evaluating the endoscopic feature of Crohn's disease (CD) and ulcerative colitis (UC) is one of the key elements in distinguishing CD from UC. However, to differentiate UC from CD by endoscopic image requires a precise interpretation from experienced clinicians and remains a challenge. This study aimed to establish an artificial intelligence model to assist in the classification among CD, UC, and healthy control based on colonoscopic images in the absence of other relevant clinical information.
[Methods] A total of 15,330 eligible colonoscopic images captured from 217 CD patients, 279 UC patients, and 100 healthy controls recorded in the endoscopic database of Tongji Hospital from January 2014 to May 2021 were retrospectively collected. A 101-layer convolutional neural network (CNN) model (ResNeXt) was selected and trained to classify endoscopic images into CD, UC, or normal. We assessed ResNeXt-101's performance by comparing the per-image and per-patient parameters of three-categories classification from the CNN model and six clinicians of different seniority using a test image set of 1458 images.
[Results] In per-image analysis, ResNeXt-101 achieved an overall accuracy of 92.04% for the colonoscopic images distinction among CD, UC, and normal, which was higher than that of the six clinicians (90.67%, 78.33%, 86.08%, 73.66%, 58.30%, and 86.21% respectively). ResNeXt-101 also showed

higher differential diagnosis accuracy in per-image analysis compared with the clinician with the best performance (CD 92.39% vs. 91.70%; UC 93.35% vs. 92.39%; normal 98.35% vs. 97.26%). In per-patient analysis, the overall accuracy of the three-category classification task for the CNN model was 90.91% compared with 93.94%, 78.79%, 83.33%, 59.09%, 56.06%, and 90.91% of clinicians, respectively.
[Conclusion] The ResNeXt-101 model established in our study performed superior to most clinicians in classifying the colonoscopic images of CD, UC, and healthy control, suggesting the clinical application potential of this model in assisting the identification of CD, UC, and normal endoscopic images for a majority of clinicians.

「 P095 」

Distinct pattern of gut microbial dysbiosis in Crohn's Disease and intestinal tuberculosis – A Machine Learning-based classification model.

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[Background] Crohn's disease (CD) and intestinal tuberculosis (ITB) are chronic granulomatous inflammatory disorders characterized by a compromised mucosal immunity. Even with diverging etiologies, CD and ITB presents an uncanny resemblance in clinical manifestation resulting in diagnostic dilemma. The gut microbiota regulates myriad of gut mucosal immunological processes. Present study aims to decipher gut microbial dysbiosis in the two disorders and utilize the CD and ITB-specific gut dysbiosis to construct a machine learning (ML)-based predictive model, which can aid in their differential diagnosis.
[Methods] Fecal samples from healthy controls (n=12) and from patients with CD (n=23) and ITB (n=25) were subjected to 16S (V3-V4) amplicon sequencing. Processing of raw reads, construction of ASV feature tables, diversity, core microbiome analysis and ML classifier construction was done using QIIME2-2021.4. Differential abundance analysis (DAA) between the groups was carried out using Deseq2, after adjusting for the subject-specific confounders.
[Results] The α and β diversity indices in CD and ITB groups were significantly reduced than HC group (p = 0.011 and 0.012 resp.), with no significant differences between the two diseases (Fig.1A, 1B). On comparison with HC, CD and ITB groups showed reduction in members of Firmicutes and Bacteroidetes, with enhancement of Actinobacteria and Proteobacteria (Fig.1C and 1D). DAA (FDR q <0.1, FC >2.5) between CD and ITB groups revealed expansion of Succinivibrio dextrinisolvens, Odoribacter splanchnicus, Megasphaera massiliensis, Bacteroides uniformis and B.xylanisolvens in CD group, while Clostridium sp., Haemophilus parainfluenzae and Bifidobacterium sp. were elevated in ITB (Fig.2A). Random Forest-based ML model constructed on the basis of raw microbiome reads and using 80% of the samples to train the model, showed predictive accuracy of 0.78 (AUC=93%). (Fig.2B)
[Conclusion] Our study shows that CD and ITB witnesses significant changes in gut microbial structure. With no significant differences in microbial diversity between two diseases, the signature of gut dysbiosis is distinct between CD and ITB. Exploitation of these differences to construct ML models can potentiate differential diagnosis of CD and ITB.

「 P096 」

MyD88 inhibition-induced intestinal microbial imbalance stimulates inflammatory response via NOD-like receptor signaling pathway

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[Background] The interaction between gut bacteria and innate immunity plays an important role in the pathogenesis of inflammatory bowel disease (IBD). Myeloid differentiation factor 88 (MyD88) is the core signal transduction molecule for Toll-like receptors (TLRs) which recognize microbe and defend against its invasion during microbiota-host interaction. However, the role of MyD88 in the pathogenesis of IBD is still controversial. This study aims to investigate the impact of the MyD88 signaling pathway on intestinal inflammation and the underlying mechanism.
[Methods] MyD88 knockout (MyD88-/-) mice and MyD88 inhibitor (TJ-M2010-5, TJ5) were used to investigate the effect of MyD88 deficiency or suppression on acute DSS-induced colitis. Disease activity index (DAI), colon length, histological score (HS), and inflammatory cytokines were examined to evaluate the colonic inflammation. The composition and abundance of intestinal microbiota were analyzed by 16S rDNA sequencing. Message RNA transcriptome sequencing and GO analysis together with KEGG enrichment were used to identify the differentially expressed genes after MyD88 inhibition.
[Results] In an acute DSS-colitis model, the colonic inflammation was not significantly alleviated in TJ5-treated or MyD88-/- mice, though the markedly reduced expression of MyD88 and activated NF-κB protein were exhibited compared with control mice. Meanwhile, MyD88 suppression changed the composition of gut microbiota. The GO analysis and KEGG enrichment showed that the NOD-like receptor signaling pathway (NLRs) was one of the major upregulated immune-related pathways associated with MyD88 inhibition. The dominant change of the NLRs gene was further confirmed by RT-PCR. Blocking NOD-like receptor signals or eliminating gut microbiota by broad-spectrum antibiotics could ameliorate the DSS-induced colitis in TJ5-treated mice.
[Conclusion] Inhibition of MyD88 leads to gut microbial dysbiosis, which in turn induces intestinal inflammation by compensatory upregulation of NLRs pathway, suggesting an important role of MyD88 in regulating the composition of gut microbiota and modulating intestinal inflammation.

「 P097 」

The Role of TNFAIP3 in the Pathogenesis of Intestinal Inflammation

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[Background] Tumor necrosis factor alpha-inducing protein 3 (TNFAIP3), also known as A20, was a crucial negative regulator of inflammation. Our previous study suggested that Haploinsufficiency of A20 caused a wide spectrum of autoinflammatory manifestations, many of which displayed intestinal inflammation. In this study, we aimed to investigate whether A20 participated in the process of mitophagy during intestinal inflammation via its ubiquitination pathway.
[Methods] TNFAIP3+/- mice with reduced A20 expression and the wild type littermates, HT-29 cell line were used in the study. ROS, T-AOC, SOD, GSH-PX, and MDA were measured to assess oxidative stress. Mitochondria were extracted and ATP, JC-1 were detected to analyze mitochondrial damage. PINK1, P62, and LC3B were detected by Western-blot, and autophagosome was observed by the transmission electron microscope to evaluated mitophagy. Co-immunoprecipitation, ubiquitination analysis, phosphorylation detection, and confocal microscopy were conducted to assess the regulatory effect of A20.
[Results] The body weight of TNFAIP3+/- mice was

lower than those of the wild-type mice at the same age. There was a higher degree of inflammation and oxidative stress in the colon of TNFAIP3+/- DSS-colitis mice as compared to wild-type DSS-colitis mice. Meanwhile, reduced expression of A20 aggravated mitochondrial damage and suppressed mitophagy after DSS treatment. In vitro, the binding of A20 and PINK1 was increased after CCCP treatment. Knockdown PINK1 in HT-29 cells decreased the phosphorylated A20 in the mitochondrial membrane during CCCP-induced mitophagy. The ubiquitination of outer mitochondrial membrane protein TOM20 was increased as the binding of TOM20 to A20 increasing.
[Conclusion] A20 protein acted as an E3 ubiquitin ligase and led to the TOM20 protein ubiquitination after phosphorylated by PINK1 and transferred to the outer mitochondrial membrane in the process of regulating mitophagy in intestinal inflammation.

「 P098 」

New observation on iron metabolism with liver iron concentration of Crohn's disease under magnetic resonance

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[Background] To compare the clinical characteristics, disease activity, iron metabolism, body mass index (BMI) and prevalence of Non-alcoholic Fatty Liver Disease (NAFLD) in patients with Crohn's disease (CD) with different liver iron concentrations (LIC).
[Methods] We retrospectively studied the clinical data and MRE imaging data of 147 patients with CD. R2* for LIC in the MRE data was analyzed. Patients with CD were categorized in quartiles (Q1-Q4) according to R2* under MRE. Patients with R2* ≥ 60 sec−1 are considered to have elevated LIC. Clinical information and MRE data were integrated for statistical analysis.
[Results] Seventeen patients in Q1 (47.2%) had CRP < 3 mg/L, which was less than the other quartiles (P < 0.01). Five patients (5/11, 45.5%) diagnosed as iron deficiency anemia (IDA) or IDA combined with anemia of chronic disease (ACD) likely in Q4. Iron overload was found in 2 patients (2/102, 2.0%). In patients with elevated LIC, 21.4% treated with infliximab (IFX), 35.7% were in periods of remission, 64.3% were underweight, 42.9% had non-obese NAFLD. In patients with normal LIC, the percentage was 60.2%, 78.2%, 28.6% and 14.2%, respectively. All the differences were statistically significant.
[Conclusion] IFX treatment is associated with normal LIC in CD patients. Elevated CRP is more common in patients with low LIC. Some CD patients with "iron deficiency" anemia have a relatively high LIC. Iron overload was found in CD patients. Elevated LIC are associated with active CD, underweight, and non-obese NAFLD.

「 P099 」

Dermatological lesions in patients with inflammatory bowel diseases on use of anti-tnf drug

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[Background] Introduction: Anti-TNF drugs such as infliximab, adalimumab, and certolizumab pegol have been largely used for the treatment of Inflammatory Bowel Diseases (IBD) for the last two decades. These biological agents have already shown efficacy and good safety profile. The anti-TNF drugs have demonstrated good results not just in the induction of remission, but also in the long-term maintenance. Nevertheless, the occurrence of dermatological lesions related to anti-TNF agents is not rare.
[Methods] Methods: We've made a retrospective analysis of charts of 1477 patients seen between 1998 and 2020, with inflammatory bowel disease from a specialized IBD center in Sao Paulo, Brazil (Instituto Steinwurz de Saude do Intestino) to understand when and how these skin lesions occur. During that period of time, 298 patients received either infliximab, adalimumab, or certolizumab pegol, or even more than one, in different periods of time.
[Results] Results: From the 298 patients that received anti-TNF-α therapy, 21 (7%) of them developed skin lesions probably related with the treatment. Among those patients, we found 6 (28%) case of psoriasis, 4 (19%) of herpes, 4 (19%) of atopic dermatitis, and 2 (9,5%) of vasculitis as being the most common findings.
[Conclusion]Conclusion: Dermatological lesions may occur in patients with inflammatory bowel diseases on use of anti-TNF drugs, probably related with the treatment. It's important to point out that in the vast majority of cases, skin lesions are mild and suspension or switching of treatment is unnecessary.

「 P100 」

Ustekinumab efficacy in Crohn's disease: results of a real-life evaluation in a specialized center in Brazil

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[Background] Introduction: Ustekinumab is a monoclonal antibody indicated to the treatment of adult patients with active moderate to severe Crohn's disease. The objective of this study was to evaluate clinical and laboratory responses after two doses of Ustekinumab for Crohn's disease in patients without previous biologic therapy and with failure / tolerance to the treatment with biologics (Anti-TNF or Anti-integrin).
[Methods] Methods: Medical records of 75 patients were analyzed and, among these, 54 were evaluated clinically and in laboratory between weeks 12 and 16 of treatment.
[Results] Results: Out of the 54 patients assessed, 27/54 (50%) were women, and regarding previous use of biologics: 36/54 (66.7%) presented failure/tolerance to previous biologic therapy [Ustekinumab was the 4th, 3rd, 5th and 2nd biologic used in 12/54 (33.3%); 10/54 (27.8%); 7/54 (19.4%) and 7/54 (19.4%) patients, respectively] . In the presence of previous biological therapy, favorable response to Ustekinumab was observed in 16/36 (44.4%) and in the group where Ustekinumab was the first biologic drug used, the efficacy observed was 13/18 (72.2%). Fecal calprotectin levels were better in responding patients. Four patients of the casuistry have had concomitant psoriasis (two in each group according to the previous use of biologics) and all of them showed improvement of the lesions after the use of Ustekinumab.
[Conclusion] Conclusion: Ustekinumab seems to be a safe and efficacious medication to treat Crohn's disease in patients that have not been previously exposed to biologic therapy as well as those who had already been exposed to those therapeutic agents. However, better clinical response was observed in patients that used Ustekinumab as first biologic therapy.

「 P101 」

Clinicopathological spectrum of ulcerative colitis at a tertiary referral hospital in kwazulu-natal， south africa

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[Background] Background Ulcerative colitis (UC)

represents chronic inflammation of the mucosa of the rectum and a variable extent of the colon. The chronic nature and associated complications may result in a significant decline in quality of life of patients and a burden on the health care system. Aim Describe the demographics and disease course of UC in KwaZulu-Natal, South Africa thereby understanding the influence of the disease on the health care system and improve management of patients.
[Methods] A retrospective chart review of patients diagnosed with UC attending Inkosi Albert Luthuli Central Hospital from 2002 to 2019 was done. Demographic data, clinical variables and disease outcomes of patients with UC were extrapolated from the password-protected hospital information management system and analysed using Microsoft excel. Ethical approval was obtained from the Biomedical Research Ethics Committee of the UKZN (Ref.:BE502/16).
[Results] UC was diagnosed in 262 patients (64%), including 157 Indian (60%), 68 Black (26%), 27 White (10%), and nine Coloured (3%). M:F ratio was 1:1.1. Median age at diagnosis was 33 years (IQR 23-45). Most patients presented with diarrhoea (102, 39%); extensive colitis (E3: 154; 59%) and anaemia 60 (23%). Forty-two (16%) had extraintestinal manifestations (EIMs) at diagnosis namely peripheral and axial arthritis (11%), PSC (5%) and uveitis (1%). The main complication was acute severe colitis (14; 5%). Most patients were treated with aminosalicylates (228; 87%) and immunomodulators (186; 71%). Abdominal surgery was required in 50 (19%) most commonly for failed medical therapy (19; 7%) and acute severe colitis (16; 6%). Clinical remission was recorded in 113 (54%) and death occurred in 12 (5%) at median follow-up of 59 months (IQR 14-114).
[Conclusion] Age at diagnosis was young and gender distribution was equal. Acute severe colitis and arthritis was the main complication and EIM respectively. Surgical referral rate was 19%. Clinical remission was achieved in the majority.

「P102」

Efficacy of Faecal Microbiota Transplantation for Induction of Remission in Patients with active Ulcerative Colitis : Results from a series of 192 patients

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[Background] Faecal microbiota transplantation(FMT) targeting gut microbiome dysbiosis is an emerging therapy for ulcerative colitis(UC). We report our experience with FMT used for induction of remission in 192 patients with active UC.
[Methods] This is a single-center retrospective analysis of patients with active UC(total Mayo score≥3 and Mayo endoscopic sub-score >1) treated with FMT between September 2015 and December 2019 at Dayanand Medical College and Hospital, India. Faecal samples from two random unrelated healthy voluntary donors were administered through colonoscopy at weeks 0,2,6,10,14,18, and 22. The primary outcome was achievement of steroid-free clinical remission(Mayo score ≤2, with each sub-score ≤1) at week 24. Secondary end points were clinical response(reduction of Mayo score ≥30% and ≥3 points compared to baseline), and endoscopic remission(-Mayo score 0 or 1).
[Results] During the study period, 192 patients[mean age 34.54±11.68 years; 123(64.06%) males]with active UC (mean Mayo score 7.46±2.22) were treated with FMT. The main indications for FMT were steroid dependent UC [n=121 (63.02%)]followed by chronic active and acute severe UC [n= 39(20.31%) and 32(16.66%) respectively] . Majority of the patients had moderately-severe disease. Ninety-six (50%) patients completed 7 FMT sessions as per protocol. On intention to treat analysis, steroid-free clinical remission was achieved in 94 (48.95%) patients (mean FMT sessions needed to induce remission 4.08±1.69), whereas clinical response and endoscopic remission were achieved in 135 (70.31%) and 95 (49.47%) patients, respectively. (Table 1) The proportion of patients in remission increased with number of FMT sessions. (Fig. 1) Twenty-six (13.54%) patients dropped out (non-response, n=10; persistent worsening of diarrhea, n = 5; bleeding per rectum, n=4; perianal pain, n=4 and fever, n=3). No serious adverse events were noted.
[Conclusion] Multisession FMT via colonoscopic route is a promising therapeutic option for patients with active UC to induce clinical remission.

「P103」

Clinical Profile of Elderly Onset Inflammatory Bowel Disease in a tertiary care center in north India

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[Background] Inflammatory bowel disease (IBD) is increasingly being recognized in elderly patients. Data on clinical spectrum of IBD in this subset of elderly-onset IBD patients is lacking from India.
[Methods] A cross-sectional retrospective analysis of a prospectively maintained database of patients diagnosed with IBD between January 1991 and June 2020 was conducted. The clinical spectrum of elderly-onset IBD including demographic profile (age and gender), clinical presentation, disease characteristics (dis¬ease behavior and severity, extent of disease) and treatment were recorded and compared with adult-onset IBD.
[Results] During the study period, 3617[ulcerative colitis(UC),n=3047; Crohn's disease(CD),n=540] patients with IBD were recorded in the database. A total of 124(4.06%) patients had elderly-onset UC and 41(7.59%) had elderly-onset CD. Seventy-seven(62.09%) and 20(48.78%) patients were males in UC and CD cohorts respectively. Diarrhea(91.93%), blood in stools(79.83%) and pain abdomen(64.51%) were the commonest presentations for UC, whereas pain abdomen(82.92%), weight loss(60.97%) and diarrhea(53.65%) were commonest in CD. For both UC and CD, majority of the patients had moderately severe disease(70.96% and 70.73% respectively). Left sided colitis(58.06%) was the commonest disease location in UC. Isolated ileal disease (56.09%) and inflammatory behavior(73.17%) were the commonest disease presentations in CD. 5-aminosalicylates were the commonest prescribed drug for both UC and CD. Biologics and thiopurines were used in 3.22% and 10.48% in elderly-onset UC and 0% and 14.63% in elderly-onset CD. The patients with elderly-onset IBD had higher prevalence of co-morbidities, lower BMI, lower rates of positive family history of IBD and lesser duration of symptoms before diagnosis. The comparison of elderly-onset IBD (UC, n=124; CD, n=41) and adult-onset IBD (UC, n=2670; CD, n=447) is summarized in Table 1(UC) and Table 2(CD).
[Conclusion] Elderly-onset IBD in India has a distinct clinical presentation as compared to western population. Larger multicenter studies are needed to corroborate these findings.

「P104」

Prevalence of Primary Sclerosing Cholangitis in Patients with IBD in a Tertiary Care Center in North India

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[Background] Comorbid inflammatory bowel disease (IBD) and primary sclerosing cholangitis (PSC) represent a unique phenotype. Approximately 4-5% of IBD patients may develop PSC-IBD. PSC-IBD patients more frequently have ulcerative colitis (PSC-UC). Clinical presentation of PSC-IBD less significant than IBD alone. However, there is an increased risk of malignancy with PSC-IBD. However, Indian data on prevalence of PSC-IBD is limited.
[Methods] Cross-sectional retrospective analysis of prospectively maintained database of IBD patients was performed. Patients diagnosed with PSC-IBD were identified. The diagnosis was based on elevated ALP and subsequent radiological evidence of PSC
[Results] 3587 patients (UC, n=3047, 84.9% and CD, n=540, 15.1%) with IBD were retrieved from the

database. Ten patients with PSC-IBD [n=10; 0.27%; UC(n=7); CD (n=3); mean age 40.33±16.46 years; 60% (n=6) males)]were identified. The mean ALP was 332.6±47.92 U/L . All the patients had moderately severe disease. Corticosteroids were used in 7 patients and infliximab was used in 1 patient for induction of remission.One patient needed surgical intervention for intestinal perforation. None of the patient had concomitant colorectal cancer, while one patient developed cholangiocarcinoma and later succumbed to the illness.
[Conclusion] Results show that PSC-IBD is uncommon in north India. In contrast to the western literature, the disease is moderately severe and not quiescent. Incidence of CRC was low; one patient had ICC. More epidemiological data is needed is establish the prevalence of PSC-IBD among Indians.

「 P105 」

Clinical Profile of Pediatric Inflammatory Bowel Disease at a tertiary care center in north India

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[Background] The global incidence and prevalence of pediatric inflammatory bowel disease (IBD) is increasing. Approximately 25% of patients with IBD present before age of 20 years Among children, 4% present before age 5 years, 18% before age 10 years and the peak onset is in adolescence. There is limited data on clinical spectrum pediatric IBD from India.
[Methods] A cross-sectional retrospective analysis of a prospectively maintained database was performed and patients diagnosed with IBD between January 1991 and December 2019 were analyzed. The clinical spectrum of pediatric IBD was recorded and compared with adult-onset IBD.
[Results] Out of 3587 patients with IBD, 113 (3.15%) patients had pediatric IBD [Ulcerative colitis : 84 (74.33%), Males : 56 (66.66%)][Crohn's Disease : 29 (25.66%), Males : 18 (62.06%)] . 5-aminosalicylates were the commonest prescribed drug for both UC and CD. Biologics were used in 7.14% patients in pediatric UC and 27.58% patients in pediatric CD and thiopurines used in 19.04% patients in pediatric UC and 37.93% in pediatric CD.
[Conclusion] Pediatric IBD has a unique clinical spectrum that is distinct from adult onset IBD. Larger multi-center studies are needed to study the disease pattern and behavior for optimized care of patients.

「 P106 」

Clinical, Biochemical And Molecular Predictors of Non-Response To Anti-TNF Therapy In Patients With IBD : A Pilot Study

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[Background] Background: Patients with Inflammatory bowel diseases (IBD) not amenable to conventional therapy are treated with anti-TNF agents. Primary non response (PNR), as well as secondary loss of response (LOR), is often seen and hence there is an unmet need for defining factors that can predict response to anti TNF agents. Aim: The present study aimed at identifying clinical, biochemical and molecular markers that predict PNR at week 14 after induction dosing and SLR at week 54 in patients with IBD: Ulcerative colitis(UC) and Crohn's disease(CD).
[Methods] Patients with IBD who were treated with anti-TNF agents from January 2005 to October 2020 were included in this retrospective study. Data concerning clinical and biochemical predictors of response was retrieved from a prospectively maintained database. Mucosal biopises taken before initiation of anti TNF therapy were available from a biorepository which is maintained for patients with IBD. Immunohistochemistry (IHC) stains for expression of Oncostatin M (OSM-M), Oncostatin M receptor(OSM-R) and IL-7 R receptor were done in mucosal biopsies.
[Results] 168 patients[104 CD, 64 UC]received anti-TNF therapy. The mean age at initiation of anti-TNFα agents was 34.6±13.7 years and the median disease duration before anti TNF initiation was 60 months (Range:34-108). PNR was seen in 11.5% and 23.5% and LOR was seen in 74% and 45% of patients with CD and UC respectively. In CD, stricturing disease ([OR(CI):5.0(1.0-22.0),p=0.004]and anemia [8.1±1.6 vs 9.5±7.7, p=0.025]) predicted PNR at 14 weeks. In CD, higher expression of epithelial OSM predicted LOR at 54 weeks (nonresponders vs responders : 5.3+2.7 vs 2.7+0.9, p=0.036). In UC, no clinical, biochemical or molecular marker was found predictive of response.
[Conclusion] In this pilot study, anaemia and stricturing disease were predictors of PNR in patients with CD. Higher baseline expression of OSM in epithelial cells predicted LOR in patients with CD.

「 P107 」

Fecal and Mucosal microbial and metabolomic profiles of patients with ulcerative colitis in response to FMT

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[Background] Gut microbiota modulation via faecal microbiota transplantation (FMT) is known to induce long lasting clinical as well as endoscopic remission in patients with UC. The present study aims to identify microbial and metabolomic changes in the faecal as well mucosal niches, in response to FMT in patients with UC.
[Methods] 28 patients with mild-moderate UC and 16 non-IBD controls were enrolled. Patients were given a weekly infusion of pooled-multidonor-FMT, for 8 weeks, while maintaining a uniform dietary pattern. We collected paired stool and recto-sigmoidal biopsy samples from patients with UC pre-FMT (n=28), post-FMT (n=10) and controls (n=16). 16S (V3-V4) rRNA sequencing and LC-MS based untargeted metabolomics was performed. Alpha – Beta diversity analysis and differential abundance (DA) analysis of microbiota was performed using DeSeq2 R package. Differential metabolite peaks between the three groups were identified via volcano plot and annotated using LipidMaps, HMDB, Kegg and Metlin databases.
[Results] α-diversity of patients with UC was not significantly different from that of controls, in both sample matrices. Post-FMT α-diversity of faecal samples differed significantly from the Pre-FMT group, however in mucosal tissue, the difference was non-significant. β-diveristy indices were significantly different in UC pre-FMT vs post-FMT populations for both matrices. Fecal UC pre-FMT samples displayed increased abundance of Megasphaera, Limosilactobacillus, Lactobacillus, Streptococcus, Veilonella and Sphingomonas, and Methylobacterium, while Mucosa-Associated Microbiota in UC Pre-FMT samples displayed increased abundances of Streptococcus, Limosilactobacillus, Ligilactobacillus, Eubacterium, Enterococcus, Parabacteroides and Alistipes and Burkholderia sp.), as compared to controls and Post-FMT. ANOSIM revealed faecal and mucosal controls and UC post-FMT samples to be significantly similar [R = 0.07; p = 0.1 (faecal) and R = 0.02; p = 0.315 (mucosal)] , and enriched in beneficial bacterial taxa. Distinct functional classes of metabolites, including bacterial cell wall and QS molecules, membrane lipids, metabolism of vitamins, long and medium chain fatty acids, bile acids, and tryptophan etc., were also found to be altered between the three groups in both sample matrices, as highlighted in the Fig.2.
[Conclusion] FMT efficiently restores beneficial bacterial populations and related metabolic pathways in faecal as well the relatively reserved mucosal microbial niches, which may pave way for induction of remission in patients with UC.

「 P108 」

Early initiation of thiopurines does not change disease outcomes in patients with inflammatory bowel disease.

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[Background] Background: Inflammatory bowel disease (IBD) including Ulcerative Colitis (UC) and Crohn's Disease (CD) is characterized by remitting/ relapsing course. Thiopurines have been used effectively to maintain remission in these patients. However, the effect of early initiation of thiopurines, on its effectiveness and disease course remains unknown
[Methods] A retrospective cohort analysis of patients with IBD following up at All India Institute of Medical Sciences (AIIMS),New Delhi from 2004-2020. Early and late thiopurine initiation was defined as commencement of thiopurines ≤2 and >2 years of disease onset, respectively. Efficacy was defined as state of not requiring hospitalization, anti-TNF agents, surgery, and only minimum (<2 steroid course in 2 years) steroid requirement during follow-up.
[Results] Of 1264 consecutive patients on thiopurines (both 6-MP and azathioprine), 988 (UC:720 CD:268) were considered for efficacy analysis (males-60.8%, mean age at disease onset-31.69±12.34 years and thiopurine initiation-35±13.14years). 367(UC:285 CD:82) patients had early and 621(UC:435 CD:186) had late thiopurine initiation. Median disease duration at thiopurine initiation was 14(8-19) and 56(37-96.5) months respectively in early and late group (P<0.001). Cumulative efficacy rates at 1, 3, 5, and 10 years, in UC patients were 87%, 81%, 77%, and 76% in the early and 88%, 84%, 80%, and 70% in late group respectively (P=0.72). Similarly, the efficacy in CD was also comparable in early vs late group (Figure-1). Though UC patients with early initiation required significantly higher steroid courses than late group [27.72% vs 18.39%;P=0.03). However, the number of colectomies [16 vs 13; P=0.08] , and escalation to biologics [11 vs 15;P=0.072]were not different (Table-1). In CD patients, escalation to biologics (P=0.39), surgery (P=0.35) and steroid requirement (P=0.58) were comparable between two groups (Table-2).
[Conclusion] Early and late thiopurine initiation has similar efficacy in IBD patients. Early initiation does not significantly alter the need for surgery and escalation to biologics.

「 P109 」

Similar risk of infection with SARS-CoV-2 in immunocompromised and immunocompetent patients with inflammatory bowel disease and healthy controls

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[Background] The information on seroprevalence rates of COVID-19 infection among patients with inflammatory bowel disease (IBD) and its comparison to healthy controls is sparse. We compared the seroprevalence rates in immunocompromised and immunocompetent IBD patients and healthy controls.
[Methods] Patients with IBD under follow-up at the IBD clinic, All India Institute of Medical Sciences, New Delhi, were included. After obtaining informed consent, patients underwent SARS-CoV-2 antibody testing (chemiluminescent immunoassay: Seimens kit IgG against antigen S1RBD) and information on demography, drug history, past history of COVID infection and vaccination status were noted. Patients with IBD on 5-aminosalicylic acid or not on any treatment were considered immunocompetent and those who had received steroids, thiopurines or methotrexate within 6 months of sample collection were considered immunocompromised.

[Results] 235 patients (51.9%-males; mean age at enrolment-38.7±12.4 years; median disease duration-60 months [IQR:36-120]) (UC-69.4%, CD-28.9%, IBDU-1.7%) and 73 healthy controls (HCs- mean age-39.6± 10.9 years, 79% males) were enrolled from July 2020 - April 2021 (Table1). 128 (54.5%) patients were immunocompromised and 107 were immunocompetent (treatment details: 5 ASA-72.3%, steroids-15.3%, Thiopurines-40%, methotrexate-2.6%). Seventy-four (31.5%) patients were positive for IgG antibody against SARS CoV2, 2 patients (0.9%) had previous history of COVID infection and none received COVID vaccine. Seroprevalence rates between immunocompromised and immunocompetent patients with IBD and healthy controls was similar (28.1% vs 36% vs 28%, p>0.05) (Figure1). Demographic and disease characteristics such as age, gender, disease type, disease activity in last 6 months, disease duration and medication use was similar between patients with positive and negative serology (Table2). There was progressive increase in seroprevalence from July 2020 to April 2021.
[Conclusion] Upto 1/3rd patients with IBD were seropositive for IgG SARS Cov2 antibody indicating asymptomatic COVID-19 infection. The seroprevalence was similar to healthy controls and was not different between immunocompromised and immunocompetent patients with IBD.

「 P110 」

Validity and acceptability of dietary intake data with smartphone app (IBD NutriCare) in comparison with 24 hours diet recall method

Arti Gupta [1], Namrata Singh [1], Divya Madan [1], Mariyam Farooqui [1], Neha Singh [1], Shubi Virmani [1], Mukesh Singh [1], Mehak Verma [1], Aditya Bajaj [1], Manasvini Markandey [1], Bhaskar Kante [1], Peeyush Kumar [1], Sudheer Kumar Vuyyuru [1], Pabitra Sahu [1], Govind Makharia [1], Saurabh Kedia [1], Vineet Ahuja [1]

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[Background] Dietary assessment in patients with inflammatory bowel disease (IBD) is important with respect to quality and quantity both. Use of smart phone app can provide diet data with good accuracy and limited resources. This study tests the relative validity of a newly developed smart phone app "IBD NutriCare" compared to traditional method (24 hr recall) of data collection.
[Methods] Patients with IBD attending the clinic at All India Institute of Medical Sciences, New Delhi, India from January 2021 to June 2021were asked to record 7 days diet in the App and were contacted for 24 hours diet recall for 3 days at random during the same week. Energy, protein, carbohydrate, fat, and intake of fibre, cereals & millets, fruits, vegetables, grain & legumes and milk & milk products were compared between the two methods with student's t-test, inter-class correlation co-efficient and Bland Altman Plot analysis. Patients were requested for a feedback questionnaire to assess the acceptability of the diet app.
[Results] Forty nine patients with IBD (mean age: 75% male, 38 UC, 6 CD, 5 IBD-U: Table 1) completed the diet entry. There was no significant difference in the mean intake of all food groups and nutrients (energy, protein, carbohydrates)(except for fat: mean difference-12.41+7.8, p<0.001) between the two methods (Table 2). Further, a significant interclass correlation (excellent for protein, fat, carbohydrate, energy, fibre, fruits and vegetables, >0.9 for all; moderate for grains&legumes and vegetables) was noted between the two methods for all nutrients and food groups. Except for fat intake, Bland-Altman plot analysis showed good agreement between the two methods (Figure 1). On average patients used the app for 15.7 days of 30 days and 70% patients entered data for more than 10 days signifying good acceptance of the app amongst the selected patients. Majority (90% of patients) preferred using app for dietary assessment likely due to its user friendly interface and ease of diet entry
[Conclusion] This study validated IBD NutriCare app as a method for real time dietary assessment in patients of IBD. This app can be used as a tool for diet data collection in research and has the advantage of providing vast diet data across various regions.

「 P111 」

Minimal risk of lymphoma despite long term use of azathioprine in patients with inflammatory bowel disease: a longitudinal cohort analysis from Northern India

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[Background] Thiopurines are widely used to maintain remission in both ulcerative Colitis (UC) and Crohn's Disease (CD). Reported effectiveness and tolerability rates have been variable across studies. Moreover, there are only sparse data in Asian population regarding the long-term efficacy and safety of azathioprine (AZT).
[Methods] Records of 5351 patients followed up at IBD clinic, All India institute of Medical Sciences, New Delhi from 2004-2020 were evaluated retrospectively. Azathioprine efficacy was defined as no requirement of surgery, hospitalizations, anti TNFs agents, and minimum steroid (≤1 course in 2 years) requirement on follow up. Safety was evaluated in terms of long-term adverse events and development of malignancy.
[Results] Of 5351 patients with IBD, 1093 who received AZT for > 3 months (UC=788 [proctitis-1.9%, left sided colitis-44.9%, pancolitis-53.1%] , CD=305 [inflammatory-42.6%, stricturing-46.9%, fistulizing-10.5%]) were included (60.8%-males, mean age at disease onset-31.69±12.34 years, median disease duration at AZT initiation-3 (1-5) years) (Table1). Follow-up and treatment duration on AZT were 7(4-12) years and 39.41±40.27 months respectively. Mean initiation and maintenance dose of AZT was 1.09±0.45 mg/kg and 94.82±21.29, respectively. One,3,5, and 10 years relapse free survival was 85%,79%,76%, and 64%; 87%, 82%, 79% and 72%; and 78%, 72%, 68% and 61% in overall cohort, UC and CD patients, respectively (Log-rank P=0.001 between UC and CD) (Figure1). Median relapse free survival in UC and CD patients was 180 and 120 months respectively. Three hundred fifty-nine [UC:249(31.6%); CD:110(36.07%); P=0.158]patients developed adverse events (AE), commonest was myelosuppression (23.42%) followed by gastrointestinal intolerance (2.97%), flu like illness (1.7%), and arthralgia/myalgia (1.37%) (Table 2). Myelosuppression was the commonest cause of AZT withdrawal. No patient (including 254 patients on AZT for ≥5 years) developed lymphoma or non-melanoma skin cancer.
[Conclusion] Long term Azathioprine monotherapy in the patients of IBD is safe with minimal risk of lymphoma and non melanoma skin cancer.

「 P112 」

Partial enteral nutrition in combination with exclusion diet is not superior to standard medical therapy in mild to moderate ulcerative colitis: A quasi-experimental study

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[Background] Unlike in Crohn's disease (CD), the role of enteral nutrition and diet in the management of ulcerative colitis (UC) has not been not clear. However, a recent randomized controlled trial has demonstrated beneficial effect of exclusive enteral nutrition in acute severe UC. Therefore, we designed this trial to evaluate efficacy of partial enteral nutrition combined with exclusion diet in patients with mild to moderate UC.
[Methods] In this quasi-experimental study we included patients with mild to moderate UC (SCCAI) and allocated them into experimental arm which received PEN combined with exclusion diet (ED) and standard of care arm (SOC). Disease activity was measured using simple clinical colitis activity index (SCCAI) and partial mayo score (PMS). We assessed clinical remission (SCCAI ≤2) at 2 and 4 weeks
[Results] Out of 60 UC patients, 30 were included in PEN + ED arm and 30 were included in SOC arm. Both arms are comparable in baseline clinical and biochemical parameters like age (36.7 vs 36.4, p=919, extent (E1, E2, E3, E2/E3: 6.7%,15%, 36.7%, 6.7%), hemoglobin(g/L) (109 vs 116, 0.164), SCCAI score [5 (4-6) vs 5 (4-5.2), p=0.562] , and PMS [4 (3-4.2) vs 4 (3-4), p=912]were similar between both groups except serum albumin which is higher in SOC arm (g/L) (35 vs 40, p=0.030). Clinical remission at 2 weeks was significantly higher in SOC arm compared to PEN+ED arm. However, it was not significant at 4 weeks. A numerically higher number of patients required steroids in SOC arm compared to PEN+ED arm, but it was not significant (16.7% vs 23.3%, p=0.748). There was a significant increase in hemoglobin in PEN+ED arm at 4 weeks (mean delta Hb: 2.9g/L), where as in SOC arm there was decrease in hemoglobin (mean delta Hb: -0.45 g/L, p=0.046). However, there was no difference in delta albumin levels.
[Conclusion] PEN in combination with exclusion diet does not improve rate of induction of clinical remission in addition to standard medical therapy in patients with ulcerative colitis. Further large randomized controlled studies are needed for definitive conclusions.

「 P113 」

High prevalence of hepatic steatosis in patients with ulcerative colitis from North India

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[Background] Data on hepatic steatosis(HS) in patients with ulcerative colitis(UC) is limited. Hence, we designed this cross-sectional study to assess prevalence of hepatic steatosis (HS) and its predictors.
[Methods] Consecutive patients with UC were recruited and all patients underwent fibro-scan, body composition analysis, bone densitometry, anthropometric measurements, baseline demographic assessment and subjective global assessment. Hepatic steatosis was diagnosed by controlled attenuation parameter(CAP) of >260 dB/m. To evaluate predictors of HS patients of UC with HS(n=29) were compared with age and sex-matched patients of UC without HS(n=27)
[Results] Among 107 patients with UC(mean age at onset- 29 ±10.6 years; males- 56%, median disease duration- 48 [IQR:24-84]months, 84%- left sided/pancolitis), 27%(n=29) had HS (Table 1). 54.7%(23/42) of patients with BMI >23kg/m2 had HS, whereas only 10%(5/50) and 6.7%(1/15) of patients with normal(18-23 kg/m2) and low BMI(<18kg/m2) had HS. 68.7% (57/83) had decreased bone mineral density(BMD) (osteoporosis/osteopenia). Patients of UC with HS had high mean body mass index(BMI)(p<0.001), waist circumference, high-fat mass(p<0.001), but similar fat-free mass(p=0.798). There was no difference in immunosuppressants exposure between these two groups. Patients of UC without HS belonged to low socioeconomic status(SES)(44.4%vs17.2%, p=0.027) and had decreased BMD (77.8vs40.9, p=0.027) compared to patients of UC with HS. Patients in both groups were followed for a mean duration of 32 months. At the end of follow up there was no difference in steroid requirement, hospitalization due to exacerbation or requirement for biologics or composite of all three outcomes(Table 2). Dietary parameters including daily energy, protein, fat and carbohydrate intake were similar between the two groups. On univariate analysis, age greater than 40years, high BMI positively predicted HS, whereas low SES and decreased BMD negatively predicted HS. On multivariate analysis, only high BMI and decreased BMD remained significant (Table 3).
[Conclusion] UC is associated with a high prevalence of hepatic steatosis and high BMI is associated with increased risk. Osteoporosis and osteopenia are less frequent in patients of UC with HS, likely because of better nutritional status

e-POSTER

「 P114 」

Higher abundance of Firmicutes and lower abundance of Actinobacteria in donors is associated with better clinical response to Fecal microbiota transplantation in patients with mild-moderate ulcerative colitis

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[Background] Fecal microbiota transplantation (FMT) has demonstrated moderate efficacy in patients with mild-moderate ulcerative colitis (UC), and donor characteristic is one of the major determinants. However, there is heterogeneity with respect to optimal donor signatures responsible for therapeutic benefit. We evaluated donor microbial signature associated with better response to FMT in UC.
[Methods] Patients with mild-moderate UC on stable doses of 5-aminosalicylic acid, immunomodulators and steroids (<20 mg/day) who received FMT and anti-inflammatory diet were included. FMT was prepared from a pool of 13 donors with 2-5 donors in each batch, and freshly prepared FMT was administered through colonoscopy (200 ml prepared from 30-50 gms of stool, infused in right colon in the first session, left colon thereafter) every weeks for 6 weeks. Clinical response was defined as decline in SCCAI of > 3, and remission as SCCAI < 3. 16srRNA gene sequencing was done on the donor stool, and the relative abundance of Firmicutes, Bacteriodes, Actinobacteria, and Proteobacteria was compared between effective and ineffective donors. Effective donors were associated with statistically significant higher clinical response when compared between patients who received FMT from a particular donor (1 – 13) vs. those who did not receive FMT from that donor (Table1).
[Results] Of 29 patients, 18 had a clinical response and 11 didn't. There was no difference in the baseline characteristics including age, gender, disease duration/extent, clinical, endoscopic and biochemical disease activity, and medications between two groups (Table2). Of thirteen donors, 3,6,7,8,10,11, and 13 were classified as effective. Though not statistically significant (small sample size), relative abundance of Firmicutes was higher and that of Actinobacteria was lower in effective as compared to ineffective donors (Figure1).
[Conclusion] Effective donors were characterized by higher abundance of Firmicutes and lower abundance of Actinobacteria, suggesting influence of donor microbial signatures on response to FMT in patients with UC.

「 P115 」

Exclusive Enteral Nutrition refurbishes beneficial gut microbiota in patients with Acute Severe Ulcerative colitis

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[Background] Exclusive enteral nutrition (EEN) acts as an adjunctive therapy to intravenous corticosteroids in patients with ASUC. Recently reported by Sahu et.al., patients with ASUC undergoing EEN showed reduced corticosteroid failure rates compared with the standard of care (SOC) group. While the mechanism of action of EEN is not clear, EEN is known to cause marked alterations in the gut microbiome. The present study extending the findings of Sahu et.al., aims to decipher the compositional changes in gut microbiome accompanying the EEN-augmented steroid responsiveness in patients with ASUC.
[Methods] In an open-label randomized control trial, patients with ASUC were randomized 1:1 to EEN and SOC groups. Patients on EEN received a semi-elemental formula for 7 days along with SOC. The primary outcome was steroid failure, defined by the need for salvage medical intervention. Faecal microbial analysis was performed on day 0 and day 7 by 16S based rRNA gene sequencing. Processing of raw reads, construction of ASV feature tables, diversity, and core microbiome analysis was done using QIIME2-2021.4. Differential abundance analysis (DAA) between the groups was carried out using Deseq2. The predictive functions were assigned using Picrust2 pipeline.
[Results] The α and β diversity indices showed no significant deviation as the result of either EEN or SOC. EEN caused a shift in core microbiota of patients with ASUC to include Streptococcus and Faecalibacterium prausnitzii, while SOC could not change the core microbiota. DAA on the pre- and post-treatment samples showed that EEN resulted in diminished Ruminococcus gnavus, Escherichia sp., Bifidobacterium longum and Enterococcus sp., while the SOC led to reduction in beneficial F. prausnitzii and enhanced Escherichia. α and β diversity indices between steroid responders (SR) and steroid non-responders (SNR) in both EEN and SOC arms displayed no significant differences. DAA of the microbial taxa in the EEN group, showed significant enhancement of Veillonella, Sediminbacterium, Ligilactobacillus, Limosilactobacillus, Granulicatella, Gamella, Enterococcus and Eggerthella in the SR group, while Schaalia, R.gnavus, Lactobacillus, Bifidobacterium, Holdemanella, Haemophilus were elevated in SNR group.
[Conclusion] ASUC accompanies gut microbial dysbiosis. EEN mediates refurbishing of certain beneficial gut microbial genera, which may account for its augmentation of the steroid responsiveness in patients with ASUC.

「 P116 」

Fecal microbiota transplantation in patients with mild to moderate ulcerative colitis is associated with early clinical response

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[Background] Fecal microbial transplantation (FMT) has been shown to be efficacious in patients of ulcerative colitis (UC). There is large knowledge gap in number of FMT sessions required for the response and timing of response to FMT.
[Methods] In this single centre (centre: All India Institute of Medical Sciences, New Delhi; duration: Aug 2019 – March 2020) study, patients with mild-moderate UC who were refractory to conventional therapy were subjected to FMT. Patients received up to 7 sessions of freshly prepared FMT once a week, administered colonoscopically (30 – 50 grams of stool). Clinical assessment using SCCAI (simple clinical colitis activity index) was done at each follow up FMT session till 7 weeks. Clinical remission was defined as SCCAI ≤ 3 and response as decrease in SCCAI scores by 3 points.
[Results] Thirty patients with UC (mean age-33.4±10.82 years, 63.6% males, median disease duration-48.5 months, 53.3% left side colitis, 46.7 % pancolitis, median SCCAI at baseline-7) were included, of which 18 (60%) had clinical response, and 16 (53.3%) had clinical remission. There was no difference in baseline demographic, clinical, endoscopic and laboratory features between responders and non-responders (Table 1). Total of 181 FMT sessions were performed, of which 19, 4, 1, 2, 3, and 1 patients' received 7, 6, 5, 4, 3 and 2 FMT sessions respectively. Median SCCAI at 8 weeks in responders was 1 (0-5) (Table 2). Median time to achieve clinical response and remission was 1 and 2 weeks respectively.

[Conclusion] Patients with mild to moderate ulcerative colitis refractory to conventional therapy achieved clinical response to FMT as early as 1 week. Studies including large number of patients are required to assess the requirement for the number of FMT sessions to achieve clinical response and remission.

「 P117 」

Establishment of a prediction model for reoperation risk of Crohn's disease and the impact of postoperative drug medications on reoperation rate

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[Background] Crohn's disease (CD) is a chronic, disabling and immune-related disease with high surgery rate and reoperation rate. So the aim of our study is to establish a prediction model for reoperation risk assessment of CD, and to further explore the impact of postoperative drug treatment on reoperation rate.
[Methods] A total of 159 CD patients with a history of intestinal surgery were enrolled in this study. Univariate analysis, multivariate analysis and receiver operating characteristic (ROC) curves were used by SPSS 26.0 statistical software. The prediction model was established based on logistic regression model and was verified by the leave-one-out cross validation.
[Results] The prediction model was finally established based on three variables: smoking history, perforating lesions (B3) and the time to the first operation of gastrointestinal symptoms. The score ranged from 0 to 1, and patients with the total score greater than 1.5 points were considered at high risk for reoperation. The area under the ROC curve of the prediction model (95%CI) was 0.774 (0.690~0.859). And the area under the ROC curve (95%CI) was 0.656(0.548-0.764) for the model verified by the leave-one-out cross validation. The reoperation rate was no statistically significant in the low-risk group with or without postoperative drug therapies, while patients with high-risk reoperation who were treated with immunosuppressants or biologics after initial surgery had significantly lower reoperation risk than those who did not receive postoperative drug therapies (Bonferroni correction $P < 0.0056$) or those who only received aminosalicylic acid (Bonferroni correction $P < 0.0056$).
[Conclusion] The prediction model of this study can be used to stratify the reoperation risk for CD. In the group with high-risk of CD reoperation, the postoperative drug therapies can reduce the cumulative reoperation rate. Immunosuppressant and TNF-αinhibitors have a preventive effect on reoperation, while aminosalicylic acid have a limited preventive effect.

「 P118 」

Trend and geographic variation in incidence and prevalence of inflammatory bowel disease in China: a nationwide employee study between 2013 and 2016

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[Background] Incidence and prevalence rates and trends of inflammatory bowel disease (IBD) in China remain largely unknown. This study estimated the nationwide prevalence and incidence of IBD and identify its noticeable trends in China between 2013 and 2016.
[Methods] We conducted a population-based analysis using data from the National Urban Employee Basic Medical Insurance database. Patients with at least three claims of IBD diagnosis were identified. A Joinpoint regression model was used to analyze the annual percent change (APC) of the age-standardized incidence and prevalence.
[Results] The age-standardized prevalence of CD increased from 1.59/100,000 in 2013 to 3.39/100,000 ($p<0.05$) in 2016, and that of UC increased from 8.72/100,000 to 17.24/100,000 ($p<0.05$) during the period, with an UC/CD ratio of 5.09 in 2016. The age-standardized incidence of CD varied between 0.82/100,000 and 0.97/100,000 ($p=0.9$), whereas that of UC slightly increased from 4.54/100,000 to 4.85/100,000 ($p=0.7$). The eastern region of China had the highest incidence and prevalence and the western region had the lowest rates, in both UC and CD, showing an east-to-west gradient.
[Conclusion] The incidence and prevalence of IBD in most urban regions in China had emerging trend over the study period and an east-to-west gradient was observed, which indicated a greater burden of in eastern China. Efforts to improve prevention strategies and promote awareness of IBD are needed, particularly in young men who are at higher risk for CD.

「 P119 」

A shortened diagnostic interval and its associated clinical factors and related outcomes in inflammatory bowel disease patients from a cohort study in China

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[Background] The diagnoses of inflammatory bowel disease (IBD) is a worldwide complicated task hence resulting in diagnostic delay. The diagnostic interval of IBD and associated factors of diagnostic delay remained unclear in China.
[Methods] We retrospectively analyzed clinical data of a regularly follow-up cohort of hospitalized IBD patients in Peking Union Medical College Hospital from January 1998 to January 2018. We then divided patients into non-delayed and delayed group according to their diagnostic interval.
[Results] There were 516 and 848 patients with confirmed Crohn's disease (CD) and ulcerative colitis (UC) during the cohort. The median diagnosis interval was 6 months and 20 months in UC and CD patients respectively ($P<0.05$). A decreasing trend of diagnostic interval of IBD was observed as time passed, from 9 months to 1 month in UC and 30 months to 3 months in CD respectively between 2001 and 2017. The longest diagnostic interval were 29.5 months in CD patients with first symptoms at ages of 51-60 and that was 12.5 months in UC patients at ages of 41-50. ITB and infectious enteritis were the diseases that most likely to be misdiagnosed in CD and UC patients, which accounted for 18.2% and 14.3% respectively. CD patients having intestinal obstruction, diabetes and appendectomy history accounted for larger proportion in diagnostic-delayed group while those who had fever as first symptom were more common in non-delayed group. UC patients who had diabetes and been misdiagnosed as chronic enteritis accounted for larger proportion in diagnostic-delayed group.
[Conclusion] The diagnostic interval of IBD patients has decreased over years. Some clinical manifestations such as initial symptoms and age at symptom onset may help to shorten this interval. Diseases such as tuberculosis and infectious enteritis should be reminded during differentiation. It still needs larger cohort and longer follow-up period to prove connection between diagnostic delay and prognosis in Chinese IBD patients.

「 P120 」

Proper diets might reduce the risk of inflammatory bowel disease: a propensity matching analysis of multicenter study in China

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[Backgrounds] The inflammatory bowel disease (IBD) population increases gradually in China, associated with environmental risk factors, including diets. Therefore, identifying vital dietary factors would intervene in the increasing prevalence of IBD.
[Methods] This study enrolled 1274 Crohn's disease (CD), ulcerative colitis (UC) and matched healthy subjects in 36 hospitals across China from August 2018 to August 2019. All participants completed an electronic dietary questionnaire. We used propensity-score matching (PSM) to reduce bias between patients and controls, performed univariate and multivariate analyses and logistic regression analysis to construct the final food patterns. Furthermore, receiver operating characteristic curves (ROC) was

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analyzed to identify the predictive value of the food patterns.
[Results] After PSM, 294 CD patients and 438 healthy controls were matched, while 145 UC patients and 231 healthy subjects were paired. After controlling bias, eating fresh fruit every day and hot pepper more than once a month were related to decreasing risk for CD and UC (P-value for trend<0.05). Intake of fresh fish every day, refrigerator stored food (more than three days) more than once a month, and consume milk less than once a month were associated only with an increased risk of CD (P-value for trend<0.05). The area under receiver-operating characteristic curves (AUC) of these significant variables was 0.714 (95% CI 0.677-0.752) for predicting CD and was 0.712 (95% CI 0.662-0.762) for predicting UC.
[Conclusion] For those with high genetic risks of IBD, proper eating, including increasing fresh fruits and hot pepper intake, could reduce the risk. However, further research is still needed to confirm.

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