



Annual Congress of the Indian Motility & Functional Diseases Association

Theme: GI Motility and Gut Brain Interaction Disorders: From Clinics to Innovations

7th - 8th May 2022, Lucknow

Endorsed by









Governing Council of The Indian Motility & Functional Diseases Association (IMFDA)

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www.gimotilityindia.in



History of the Indian Motility and Functional Diseases Association

(www.gimotilityindia.in)



Asha Misra, PhD
Governing Council Member and Treasurer,
Indian Motility and Functional
Diseases Association
(www.gimotilityindia.in)

he conditions grouped under the umbrella term 'functional gastrointestinal disorders' (currently re-named "Disorders of gut-brain interaction"), originally coined to indicate gut disorders without any detectable structural and organic abnormalities, affected a large proportion of patients visiting Gastroenterology clinics. Though most of the Gastroenterologists managed these patients in India, only a few had deep clinical and research interests in this field.

Research in this field in India saw an upturn in the 1990s. The researchers in some of the centers in the country started to learn more about the pathophysiology of functional and, more specifically, motility disorders. The first introduction of specialized gastrointestinal pathophysiology and motility laboratories in the country was in the 1990s. Tribute must be paid to the late Prof. Subhash R Naik, the then Head of the Department of Gastroenterology at Sanjay Gandhi Post Graduate Institute of Medical Sciences, for his unparalleled ability to motivate and encourage his younger colleagues to probe deeper into subjects, however basic these may seem. The first full-fledged gastrointestinal pathophysiology and motility laboratory in India was established in 1990 at the Sanjay Gandhi Post Graduate Institute of Medical Sciences, Lucknow, under the supervision of Prof. Naik. This brought him accolades from around the world. The idea of forming an Indian Motility Association was conceived by Prof. SR Naik and his mentee Prof. Uday C Ghoshal as early as 2000. However, Prof. Naik left this world for his heavenly abode in July 2002, leaving behind a dream to be still fulfilled.

Shouldering his mentor's legacy and publishing liberally on the subject, Prof. Uday C Ghoshal stayed focused on motility disorders while many others drifted away. Being absorbed by the deep pulsating rhythm of the Bengali poem'Ekla chalo re' (if no one responds to your call, then walk on your path alone) by Rabindranath Tagore, motivated by the book 'The fire in my heart' by Debasis Chatterjee, and with the vision of not giving up portrayed by the Hindi movie 'Lagaan', a targeted effort towards the objective was re-initiated by Prof. Ghoshal in 2005. Prof. Ghoshal painstakingly aggregated his experiences from across the national and international platforms, and patronization from prominent world experts like Dr. Kok-Ann Gwee from Singapore, Dr. Sutep Gonlachanvit from Thailand, and Dr. Young-Tae Bak from Korea, brought to life The Asian Neurogastroenterology & Motility Association (ANMA), which was registered in Thailand in the year 2010.

However, the ultimate objective of forming an Indian Neurogastroenterology and Motility Association remained to be realized; it took only one year more for Prof. Ghoshal to register the Indian Motility and Functional Diseases Association (IMFDA) in the year 2011 at the office of the Deputy Registrar Firm and Society in Lucknow, Uttar Pradesh, India with its head office at the Department of Gastroenterology, Sanjay Gandhi Post Graduate Institute of Medical Sciences, Lucknow. Prof. Ghoshal's un-wearying dedication and diligent hard work continued to mentor this association initially as a Secretary General and subsequently as its President.



The aims of this Association are: (a) to provide standardized care to patients suffering from gastrointestinal motility and functional GI disorders in India, (b) to share knowledge about these diseases in India with doctors and other health care workers, (c) to increase awareness about these disorders in India with patients, public and policy-makers, (d) to encourage research on this subject at various centers in India, (e) to promote knowledge about gastrointestinal motility and functional gastrointestinal disorders in India in all possible ways.

IMFDA also shares an official journal by the name of Journal of Neurogastroenterology & Motility (J Neurogastroenterol Motil), which was started in 2010 by collaboration between the ANMA and Korean Society of Neurogastroenterology Motility with painstaking efforts of Prof. Young-Tae Bak (then the President of ANMA) and Prof. Uday C Ghoshal (then the Secretary General of ANMA), which has an impact factor of 4.924 currently. This journal has become the highest impact factor journal in the World among all the neurogastroenterology motility journals in a short span of time since its inception. It is also the official journal of the Korean Society of Neurogastroenterology and Motility, the Thai Neurogastroenterology and Motility Society, the Japanese Society of Neurogastroenterology and Motility, the Chinese Society of Gastrointestinal Motility, the South East Asian Gastroneuro Motility Association and the Asian Neurogastroenterology and Motility Association, to foster and promote research activities in the area of the motor, sensory and functional disorders of the gastrointestinal tract. It publishes peer-reviewed articles quarterly (January, April, July, and October). The Journal is indexed/tracked/covered by Science Citation Index, SCOPUS, EMBASE, EBSCO, PubMed, PubMed Central, KoreaMed, DOI/Crossref, and Google Scholar.

Indian Motility and Functional Diseases Association hosts biennial congresses regularly to provide adequate opportunities for young investigators to present their works and learn from other experts. The first biennial congress of the Association was held on 5th-6th August 2011 in Lucknow. The second congress was organized in Mumbai in October 2013, and its mid-term meeting was on the 17th and 18th May 2014 in Lucknow. The third biennial Congress was held in New Delhi on 6th February 2015, and the fourth in

Hyderabad on 28th -29th April 2017. The 5th Congress is going to be held in Lucknow on 7-8th May 2022. From now the Society will hold annual rather than biennial congresses. It was a privilege for the Association to host the 4th Biennial ANMA Congress (ANMA Congress India) in New Delhi, India from 7th -8th February, 2015 in conjunction with its 3rd biennial congress. This congress was attended by more than 300 participants from all over the world, especially from the Asia-Pacific region, which is the emerging area of gastrointestinal motility research and treatment. The delegates and the faculty members in this congress were from 26 countries like USA, UK, Korea, Japan, China, Thailand, Malaysia, Taiwan, Sri Lanka and Bangladesh etc. It is important to mention that this congress was supported by the Rome Foundation, the Indian Society of Gastroenterology and many other international bodies.

Under the umbrella of the Association, the faculty members have also done a lot of works on the commonly occurring problems such as chronic constipation, irritable bowel syndrome to promote care of these patients, and research on these conditions with the ultimate objective to improve their lives. It has published Indian consensus on chronic constipation and two other consensus (Indian irritable bowel syndrome consensus and Asian consensus on small intestinal bacterial overgrowth) are under development.

Lao Tzu, a founder of philosophical Taoism, and a deity in religious Taoism and traditional Chinese religions, said "A journey of a thousand miles begins with a single step". A small step of initiating this Indian Neurogastroenterology and Motility Association was taken in 2005 in Lucknow. We wish that this association moves more than thousand miles in future with support from all its members and every physician and gastroenterologist in world in general and India in particular interested in the well being of the sufferers of functional gastrointestinal and motility disorders, and research and education on this subject.

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Asha Misra, PhD

Treasurer, Indian Motility & Functional Diseases Association



ब्रजेश पाठक _{उप मुख्यमंत्री}



चिकित्सा शिक्षा, चिकित्सा एवं स्वास्थ्य, परिवार कल्याण तथा मातृ एवं शिशु कल्याण विभाग, उत्तर प्रदेश

कार्यालय कक्ष संख्या-99, 100, मुख्य भवन, विधान सभा सचियालय दुरमाष- 0522-2238088/2213272 (का०)

लखनऊ: दिनांक



I am pleased to know that the Department of Gastroenterology, Sanjay Gandhi Postgraduate Institute of Medical Sciences, Lucknow and the Indian Motility and Functional Diseases Association endorsed by the Rome Foundation, USA is going to organize an educational event not only at national but also at an international level. I am further happy to know that eleven international faculty members from USA, Japan, Singapore, Australia, Italy, Malaysia, Bangladesh and Brazil are participating in this conference virtually. It is heartening to know that the Organizing Committee led by Prof. Uday C Ghoshal, Head, Department of Gastroenterology, SGPGI, Luck now chose a very timely and appropriate theme for the conference, "GI Motility & Gut-Brain Interaction Disorders: From Clinics to Innovation" supporting the "Make in India" initiative of the nation.

I wish that this educational event will be able to fulfill its aims by improving knowledge, promoting research, innovation in these aspects of Gastroenterology and their application to improve care of the patient in a cost-effect manner. I welcome all the participants of this meeting coming from the state as well as the other states.

I wish best of luck for a successful conference.

(BRAJESH PATHAK)

(ब्रजेश पाठक) उप मुख्यमंत्री उस्तर प्रदेश शासन







Prof. Douglas A. Drossman

University of North Carolina, USA Center for Education and Practice of Biopsychosocial Care Drossman Gastroenterology and the Rome Foundation

It is a great honor to be invited to the 5th annual conference of the Indian Motility and Functional Diseases Association at the Sanjay Gandhi Postgraduate Institute of Medical Sciences in Lucknow. I recall attending this conference several years ago, and it was an enjoyable and informative experience. I regret that I can't be there in person on this occasion. I also want to send wishes to you for a successful program from the Rome Foundation as President Emeritus and Chief of Operations. The Rome Foundation supports only well-qualified educational events such as this one. Therefore we endorse this event as we are committed to improving knowledge in the Disorders of Gut-Brain Interaction. These disorders relate to the science of brain-gut interactions, motility, diet, and the microbiome. We also foster multicultural research and methods to optimize the patient-provider relationship.

I hope you will enjoy my presentation entitled: "From functional GI and Motility disorders to Disorders of Gut-Brain Interaction". I seek help you understand the evolution of thinking on GI function and dysfunction over many centuries. Beginning with clinical observations of gastrointestinal symptoms and the physiology of motility disturbances, we will progress to the newer studies that led us to understand these disorders as dysregulated braingut systems. I will also trace the development of the Rome Foundation and the development of the Rome Criteria. The criteria have provided the basis for identifying and treating patients suffering from these conditions and also provide the basis for selecting these patients for research.

With all best wishes for a successful meeting,

Douglas A. Drossman MD

President Emeritus and Chief of Operations

The Rome Foundation







Prof. RK Dhiman MD, DM, FAMS, FRCP, FACG Director, Sanjay Gandhi Postgraduate Institute of Medical Sciences, Lucknow, India

MESSAGE FROM THE DIRECTOR, SGPGIMS

I am delighted to know that the Indian Motility and Functional Diseases Association led by Prof. Dr. Uday C. Ghoshal, Head, Dept. of Gastroenterology, SGPGI, Lucknow is organizing the 5th Annual Congress of the Indian Motility and Functional Diseases Association on 7-8th May 2022, which is also endorsed by the Rome Foundation, USA. I am happy to know that the Department of Gastroenterology of our institute has taken a leadership role to promote education and research in this branch of Gastroenterology not only nationally but also internationally. I believe that this initiative will have long-lasting implications in promoting training and research on the Disorders of the Gut-brain Interaction and the GI motility disorders in the World in general and India in particular. I hope that the deliberations by international and national experts in this meeting will enlighten the participants on several cutting-edge areas in these disorders, which will not only benefit the patients suffering from these disorders but also the science nationally as well as internationally.

I wish the meeting all the successes.

Prof. RKDhiman

Director, SGPGI and the Congress Patron



Message from the President, Indian Motility & Functional Diseases Association

(www.gimotilityindia.in) and the Course Director



Dr. Uday C Ghoshal

MD, DNB, DM, FACG, FAMS, RFF,
FRCP (Edin), MISG
Professor & Head, Dept. of
Gastroenterology, SGPGIMS, Lucknow
President, Indian Motility & Functional
Diseases Association
Course Director, 5th Annual
Congress of the IMFDA









It is my great pleasure to welcome all eminent guests, speakers, delegates, and scholars to the 5th Annual Congress of the Indian Motility and Functional Diseases Association. This time, we have chosen a very apt theme for the meeting "GI Motility and Gut-Brain Interaction Disorder: From Clinics to Innovation" keeping the national priority of "Make in India" in mind. The organizing committee has put together a comprehensive and diverse scientific program that, in my opinion, will be beneficial to advance the science and practice in the field of functional gastrointestinal disorders (currently called "Disorders of gut-brain interaction"). The meeting will educate physicians and gastroenterologists on the fundamentals of functional GI and motility disorders, as well as the clinical approach to these illnesses, and will feature discussions on the impact of these disorders not only in clinical practice but also in innovation and its applications.

The organizing committee is glad to welcome the national faculty members physically and the international members virtually as they could not come in person this time due to the ongoing COVID-19 pandemic. We believe that the students, practicing physicians, gastroenterologists, and researchers would benefit much from their deep understanding of the topics. I hope that the deliberations by international and national experts at this meeting will help educate participants and they will start venturing beyond their "comfort zones". This will not only improve the care of patients suffering from these disorders but also motivate the participants to bring greater levels of science through their research. I am also pleased to let the participants know that this congress will document the successful completion of two scientific activities of the Indian Motility and Functional Diseases Association, namely the Asian Pacific Consensus on the small intestinal bacterial overgrowth and the Indian IBS Consensus in adults.

I gladly welcome the contributions of all of the invited speakers, who made time out of their busy schedules to share their knowledge and experience with a big group of gastroenterologists, academicians, researchers, and postgraduate students.



Prof. Uday Chand Ghoshal

President, Indian Motility and Functional Diseases Association and the Course Director





Message from the Vise President, Indian Motility & Functional Diseases Association (www.gimotilityindia.in)



Dr. Sanjeev Sachdeva

MBBS, MD (Internal Medicine),
DM (Gastroenterology)

Director-Professor of Gastroenterology,
GB Pant Hospital, New Delhi
Chief Gastroenterologist to
Hon'ble Supreme Court of India
Vice-President IMFDA

It is a privilege for me to write this message at the release of the souvenir on the occasion of 5^{th} Annual Congress of the Indian Motility and Functional Diseases Association (IMFDA) being organized by SGPGI Lucknow on 7^{th} and 8^{th} of May 2022.

The theme of this conference is "GI Motility & Gut-Brain Interaction Disorders: From Clinics to Innovation". Conference program includes state of the art lectures on functional GI disorders by a galaxy of renowned international and national faculty members. I am pretty sure that the deliberations to be held in this conference shall be of immense value to all the participating Gastroenterologists, Physicians, Surgeons, and other Delegates.

I wish the Organizing Team a great success for this much awaited conference being held at beautiful city of Lucknow.

Dr. Sanjeev Sachdeva Vice-President, IMFDA

DGBIs



Message from the Secretary General, Indian Motility & Functional Diseases Association (www.gimotilityindia.in)



Dr Nitesh Pratap
Secretary General
Indian Motility and Functional
Diseases Association
Consultant Gastroenterologist
KIMS, Secunderabad

On behalf of Indian Motility and Functional Diseases Association I would like to invite you to the 5th Annual Congress of the Indian Motility and Functional Diseases Association to be held in Lucknow on May 7th-8th, 2022.

The organizing committee has prepared an excellent scientific program. I am confident that the deliberations in the conference by the distinguished international and national faculty members in the field of neurogastroenterology and functional gastrointestinal disorders will help the participants to understand and manage these disorders in a better way.

I wish the conference all the success

With Best Wishes

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Dr Nitesh Pratap Secretary General



KEY INTERNATIONAL FACULTY MEMBERS



Prof. Douglas Drossman **USA**



Prof. Satish S. C. Rao **USA**



Prof. Gerald Holtmann **Australia**



Prof. Giovanni barbara **Italy**



Prof. Kok-Ann Gwee **Singapore**



Prof. Hidekazu Suzuki **Japan**



Prof. Yeong Yeh Lee **Malaysia**



Dr. M Masudur Rahman **Bangladesh**



Prof. Kewin Siah **Singapore**



Dr. Rajan Singh **USA**



Dr. Carla Granja Andrade **Brazil**



KEY NATIONAL FACULTY MEMBERS

- 1. Dr. V Jayanthi, Chennai
- 2. Dr. Sanjeev Sachdeva, Delhi
- 3. Dr. Omesh Goyal, Ludhiana
- 4. Dr. Uday C Ghoshal, Lucknow
- 5. Dr. Rajesh Sainani, Mumbai
- 6. Dr. Shobna Bhatia, Mumbai
- 7. Dr. M Srinivas, Chennai
- 8. Dr. Akash Mathur, Lucknow
- 9. Dr. Anshuman Elhence, Lucknow
- 10. Dr. RK Dhiman, Lucknow
- 11. Dr. Manas Panigrahi, Bhubaneshwar
- 12. Dr. VK Dixit, Varanasi
- 13. Dr. Rupa Banerjee, Hyderabad
- 14. Dr. Soumya Jagannath Mahapatra, Delhi
- 15. Dr. Manish Paliwal, Delhi
- 16. Dr. Ujjala Ghoshal, Lucknow
- 17. Dr. Arun Karyampudi, Rajamundry
- 18. Dr. R. Talukdar, Hyderabad
- 19. Dr. Usha Dutta, Chandigarh
- 20. Dr. Govind Makharia, Delhi
- 21. Dr. BD Goswami, Guwhati
- 22. Dr. Om Prakash Singh, Kolkata
- 23. Dr. Mayank Jain, Indore
- 24. Dr. Shine Sadasivan, Kochi
- 25. Dr. Sujit Chaudhuri, Kolkata
- 26. Dr. Alok Mishra, Allahabad
- 27. Dr. Ashok Kumar, Lucknow
- 28. Dr. RK Thukral, Lucknow
- 29. Dr. Shrihari Anikhindi, Delhi

- 30. Dr. Rajesh Upadhyay, Delhi
- 31. Dr. Philip Abraham, Mumbai
- 32. Dr. Saroj K Sinha, Chandigarh
- 33. Dr. Prasanta Kumar Parida, Cuttack
- 34. Dr. Binay Biswas, Kolkata
- 35. Dr. Vivek Gupta, Lucknow
- 36. Dr. Chetan Bhatt, Mumbai
- 37. Dr. PK Agarwal, Dehradun
- 38. Dr. Asha MIsra, Lucknow
- 39. Mrs. Bushra Fatima, Lucknow
- 40. Dr. Samir Mohindra, Lucknow
- 41. Dr. Ajay Kumar Patwa, Lucknow
- 42. Dr. Puneet Mehrotra, Lucknow
- 43. Dr. Arun Khanduri, Kanpur
- 44. Dr. Tamal K Ghosh, Kolkata
- 45. Dr. Rajender Singh, Lucknow
- 46. Dr. Tapasi Ghosh, Kolkata
- 47. Dr. Gaurav Pande, Lucknow
- 48. Dr. Amit Lahiri, Lucknow
- 49. Dr. Girijesh Patel, Lucknow
- 50. Dr. Praveer Rai, Lucknow
- 51. Dr. Deepak Agarwal, Lucknow
- 52. Dr. Vinay Sachan, Kanpur
- 53. Dr. Abhai Verma, Lucknow
- 54. Dr. Rajan Saxena, Lucknow
- 55. Dr. Arshad Ahmad, Lucknow
- 56. Dr. Uzma Mustafa, Lucknow
- 57. Dr. Rajnish Singh, Lucknow
- 58. Dr. Rajoo Singh Chhina, Ludhiana



VENUE:

IMFDA GC Meeting on 6th May, 2022 at 3.30 PM, Quantum 3, ground floor, the Centrum hotel Pre-conference dinner at 8.00 PM on 6th May, 2022 at the School of Telemedicine lawn, SGPGI, Lucknow The Conference: Forum hall, the Centrum hotel, Pocket 7, Sector C, Golf City, Lucknow 226030.

Date: 7th May 2022				
Time	Topics	Speakers	Chairpersons	
8.00-8.30 AM (30 mins)	Closed door discussion among Indian IBS consensus members	All Indian IBS consensus me at Pendulum, 3rd floor, the	Centrum dining area)	
8.30-9.00 AM (30 mins)	Closed door discussion among Asian SIBO consensus members	All participating Asian SIBO (with breakfast at Pendulun dining area)	consensus members n, 3rd floor, the Centrum	
9.00-9.30 AM (30 mins)	Poster viewing at the Forum hall	Coordinated by Dr. A Elhence	& Dr. Akash Mathur	
Session I: Open-house preser	ntation of Indian Irritable Bowel Syndrome Consensus by the Indian Motility and Functional	Diseases Association (9:30 to 1	0:45 AM)	
9.30-9.45 AM (15 mins)	Statements on epidemiology and diagnostic criteria for IBS	Dr. V Jayanthi	Dr. Philip Abraham	
9.45-10.00 AM (15 mins)	Statements on pathophysiology of IBS	Dr. Sanjeev Sachdeva	Dr. Chetan Bhatt	
10.00-10.15 AM (15 mins)	Statements on investigations of IBS	Dr. Omesh Goyal		
10.15-10.30 AM (15 mins)	Statements on treatment of IBS	Dr. Uday C Ghoshal		
10.30-10.45 AM (15 mins)	Discussion			
Session II: Keynote lecture (10	:45 to 11:25 AM)			
10:45-11:25 AM (40 mins)	From functional GI and motility disorders to disorders of gut-brain interaction	Dr. Douglas Drossman (online)	Dr. Rajesh Upadhyay Dr. V Jayanthi Dr. VK Dixit Dr. BD Goswami	
Session III: Gastrointestinal m Alacer Biomedica and Medtro	otility, Chicago IV and London classification symposium (11:25 AM to 01:00 PM). Supported by nic (Manoscan)	unrestricted educational grants	from	
11.25-11.40 AM (15 min)	Chicago IV classification of esophageal motility disorders	Dr. Rajesh Sainani	Dr. Sujit Choudhury	
11.40-11.55 AM (15 mins)	How does Chicago IV differs from Chicago III ?	Dr. Shobna Bhatia	Dr. PK Agarwal Dr. Asha Misra	
11.55-12.10 PM (15 mins)	Chicago Classification 4.0 - Supine and upright protocols performed with water-perfusion High Resolution Esophageal Manometry: Who said it wasn't possible?	Dr. Carla Granja Andrade (online)	Mrs. Bushra Fatima	
12.10-12.25 PM (15 mins)	Outline of London classification algorithm for anorectal motility disorders	Dr. M Srinivas		
12.25-12.45 PM (20 mins)	Biofeedback for fecal evacuation disorders: Tricks of the trade	Dr. Yeong Yeh Lee (online)	7	
12.45-012.50 PM (05 mins)	Summary by the chairpersons & discussion			
12.50-1.00 PM (10 mins)	Sponsored forum			
Session IV: Case capsules on g	astrointestinal motility disorders (01:00 to 01:30 PM)			
01.00 -01.10 PM (10 mins)	A patient with chronic constipation and gastrointestinal bleeding	Dr. Akash Mathur	Dr. Samir Mohindra	
01.10 -01.20 PM (10 mins)	A patient with chronic vomiting	Dr. Anshuman Elhence	Dr. Ajay Kumar Patwa Dr. Puneet Mehrotra	
01.20 -01.30 PM (10 mins)	Summary by the chairpersons & discussion		Dr. Arun Khanduri	
1:30 -2:15 PM:	Lunch break	<u> </u>		



Session V: Gastrointestinal inv	volvement in Corona Virus Disease-19 (2:15 to 3:00 PM)			
02.15 to 2.30 PM (15 mins)	Gastrointestinal involvement in patients with COVID-19: Frequency and clinical significance	Dr. RK Dhiman	Dr. Tamal K Ghosh	
2.30-2.45 PM (15 mins)	Pathogenesis of gastrointestinal involvement in COVID-19	Dr. Rajan Singh (online)	Dr. Ujjala Ghoshal Dr. Rajender Singh	
2.45-3.00 PM (15 mins)	Summary by the chairpersons & discussion	Dr. Tapasi Ghos		
Session VI: Post-infection disc	orders of gut-brain interaction (03:00 to 04:00 PM)			
03.00-3.12 PM (12 mins)	Post-infection gut-brain interaction disorders: Definitions and epidemiology	Dr. MM Rahman Dr. Uday C Ghosh		
3.12-3.24 PM (12 mins)	Pathogenesis of post-infection gut-brain interaction disorders	Dr. Giovanni Barbara (online)	Dr. Gaurav Pandey Dr. Amit Lahiri	
3.24-03.36 PM (12 mins)	Post-COVID-19 disorders of gut-brain interaction: An aftershock that physicians must know	Dr. Kewin Siah (online) Dr. Girijesh Pa		
03.36-3.48 PM (12 mins)	Predictors of post-COVID-19 disorders of gut-brain interaction: What do we know?	Dr. Manas Panigrahi		
03.48-4.00 PM (12 mins)	Summary by the chairpersons & discussion			
4:00 PM to 4:15 PM: Tea B	Break			
Session VII: Current innovatio	n in Gl motility and functional Gl disorders: Global and local perspectives (4.15-5.15 PM)			
04.15-4.45 PM (30 mins)	Current innovation in diagnosis and management of GI motility disorders: The Western perspective	Dr. Satish Rao (online)	Dr. Rupa Banerjee	
		Dr. Uday C Ghoshal	Dr. Chetan Bhatt Dr. Arun Khanduri	
4.45-5.00 PM (15 mins)	Current innovation in diagnosis and management of GI motility disorders: The Indian perspective	Di. Oddy C dilosilai	Dr. Arun Khanduri	
4.45-5.00 PM (15 mins) 5.00-5.15 PM (15 mins)	Current innovation in diagnosis and management of GI motility disorders: The Indian perspective Discussion	Di. Oday C difosital	Dr. Arun Khanduri	
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Session III: Day-to-day manag	gement issues in GI motility & gut brain interaction disorders (10:00 to 11:15 AM)			
10.00-10.15 AM (15 mins)	Management of constipation-predominant IBS/functional constipation	Dr. Kok-Ann Gwee (online)	Dr. Saroj K Sinha	
10.15-10.30 AM (15 mins)	Management of Diarrhoea-predominant IBS/functional Diarrhoea	Dr. Uday C Ghoshal	Dr. Deepak Agarwal Dr. Shine Sadasivan	
10.30-10.45 AM (15 mins)	Management of functional dyspepsia	Dr. Usha Dutta	Dr. Vinay Sachan	
10.45-11.00 AM (15 mins)	Management of upper and lower GI overlap disorders	Dr. Hidekazu Suzuki (online)		
11.00-11.15 AM (15 mins)	Summary by the chairpersons & discussion			
11:15 AM to 11.30 AM: Te	a Break			
Session IV: Multi-dimensional	l clinical profile of IBS (11:30 AM to 12:45 PM)			
11.30-11.45 AM (15 mins)	Overview of multi-dimensional clinical profile of irritable bowel syndrome	Dr. Govind Makharia	Dr. Govind Makharia	
11.45-12:00 PM (15 mins)	Assessment of severity of IBS	Dr. BD Goswami	Dr. RK Thukral Dr. Alok Mishra	
12.00 -12.15 PM (15 mins)	What are low FODMAP foods and how useful is low FODMAP diet in IBS?	Dr. Uzma Mustafa		
12.15-12.30 PM (15 mins)	Psychotropic agents (visceral neuromodulators) in FGID: When, what & how much?	Dr. Om Prakash Singh		
12.30-12.45 PM (15 mins)	Summary by the chairpersons & discussion			
Session V: Selected oral papers	s (12:45 to 01:15 PM)			
12:45 to 1:00 PM (15 mins) 5 minute for each	 Esophageal manometry findings in patients with refractory symptoms of gastroesophageal reflux disease 	Dr. Mayank Jain	Dr. Philip Abraham Dr. Sanjeev Sachdeva	
presentation 2.5 minutes Q & A	2. Nocturnal acid breakthrough and esophageal acidification during treatment with dexlansoprazole as compared to omeprazole in patients with gastroesophageal reflux disease	Ms. Sushmita Rai		
1:00-1:15 PM (15 mins)	Refractory gastroesophageal reflux disease: Role of nocturnal acid breakthrough (NAB) and pharmacotherapy of NAB	Dr. Shine Sadasivan		
1.15-2.15 PM: Lunch				
Session VI: Techniques of inves	stigations in gastrointestinal motility: Ticks of the trade (02:15 to 3:15 PM)			
2.15-2.30 PM (15 mins)	How do I do and interpret hydrogen and methane breath tests and what is the current status of hydrogen sulphide breath test?	Dr. Sujit Choudhury	Dr. Ashok Kumar Dr. Abhai Verma	
2.30-2.45 PM (15 mins)	How do I do and interpret 24-h pH impedance monitoring?	Dr. Mayank Jain		
2.45-3.00 PM (15 mins)	How do I do and interpret endoanal ultrasound for anorectal sphincter evaluation?	Dr. Shrihari Anikhindi		
3.00-3.15 PM (15 mins)	Summary by the chairpersons & discussion			
Session VII: A few current issue	es in Gl motility and functional Gl disorders (03:15 to 04:00 PM)			
3.15-3.27 PM (12 mins)	Measuring the gas in breath as compared to that inside the gut to diagnose small intestinal bacterial overgrowth: A paradigm shift	Dr. Gerald Holtman (online)	Dr. Asha Misra Dr. Puneet Malhotra	
3.27-3.39 PM (12 mins)	Safety concern of proton pump inhibitors: A pending verdict	Dr. Rajesh Upadhyay	Dr. Anshuman Elhence	
3.39-3.51 PM (12 mins)	Research on GI motility and functional GI disorders in India: Current status $\&$ future directions	Dr. Philip Abraham		
3.51-4.00 PM (09 mins)	Summary by the chairpersons & discussion			
4:00-4:15 PM: Tea Break				



Time	Topics	Speakers	Chairpersons
Session VIII: Small intestinal	failure symposium (04:15 to 05:15 PM)		
4.15-4.27 PM (12 mins)	Etiology and clinical spectrum of small intestinal failure including that due to Crohn disease	Dr. Samir Mohindra	Dr. Rajan Saxena
4.27-4.39 PM (12 mins)	Pharmacotherapy including immunonutrients in patients with intestinal failure	Dr. Prasanta Kumar Parida	Dr. Arshad Ahmed Dr. Rajnish Singh
4.39-4:51 PM (12 mins)	Enteral and parenteral nutrition in critically ill patients with small intestinal failure	Dr. Binay Biswas	
4.51-5:03 PM (12 mins)	Small intestinal transplantation	Dr. Vivek Gupta	
5.03-5:15 PM (15 mins)	Summary by the chairpersons & discussion		
Session IX: Valedictory functi	on followed by tea (5.15 to 5.30 PM)		

The Abstracts have been printed without editing as submitted by the authors in EasyChair

CONFERENCE ABSTRACTS

ORAL PAPERS

SR. NO. 1

Esophageal manometry findings in patients with refractory symptoms of gastroesophageal reflux disease

Mayank Jain, Arihant Hospital and Research Centre, Indore.

Background and aims: Gastroesophageal reflux disease (GERD) is a common gastrointestinal disorder. High resolution esophageal manometry (HREM) and 24 hour pH study help to properly evaluate GERD patients. The aim of the present study was to classify patients with refractory GERD symptoms into various groups based on endoscopic and physiological testing.

Method: The present study is a retrospective analysis of patients referred for HREM and 24-h pH recording between 2019 and 2021. We included all adult patients (age > 18 years) who were referred for evaluation of refractory GERD symptoms. Upper gastrointestinal endoscopy findings, HREM and 24 hour pH findings were noted. Patients were divided into erosive reflux disease (ERD), non- erosive reflux disease (NERD), reflux hypersensitivity (RH) and functional heartburn (FH) based on test results. Demographic details and HREM parameters were compared in the four groups. Statistics- ANOVA and Chi square tests. A p value of <0.05 was considered statistically significant.

Results- A total of 144 patients were included - NERD (56, 38.9%), ERD (42,29.2%), RH (28, 19.5%) and FH (18, 12.5%). Age distribution (p 0.74), sex distribution (p 0.47) and symptom profile (p 0.12) were similar. The presence of type 2/3 esophagogastric junction (EGJ) morphology was commoner in ERD and NERD (p <0.001). Moreover, the esophagogastric junction contractile integral (EGJ-CI) and basal inspiratory pressures were significantly lower in these two groups (p<0.05). EGJ-CI was low in 32 cases of ERD (76.2%), 41 cases with NERD (73.2%), 7 cases with RH (25%) and 3 cases with FH (16.7%) respectively (p value < 0.00001).

Conclusions: FH and RH account for 32% of cases with refractory GERD symptoms. Impaired EGJ function is significantly more common in ERD and NERD patients compared to FH and RH patients.



SR NO 2

Nocturnal acid breakthrough and esophageal acidification during treatment with dexlansoprazole as Compared to omeprazole in patients with gastroesophageal reflux disease

Uday Chand Ghoshal, Arjun Balachandran, Sushmita Rai, Asha Mishra Department of Gastroenterology, Sanjay Gandhi Postgraduate Institute of Medical Sciences, Lucknow, India

Background: Nocturnal acid breakthrough (NAB) while on proton pump inhibitors (PPI), which may differ based on the duration of PPI action and Helicobacter pylori (H. pylori) infection, might influence esophageal acidification (EA) and mucosal damage. Dexlansoprazole, a long-acting PPI, has not been compared with omeprazole for NAB, gastric acid suppression and EA related to H. pylori infection.

Methods: GERD patients were evaluated using 24-h dual-channel pH-impedance monitoring while on dexlansoprazole (60 mg, n=39) and omeprazole (20 mg, n=41) to study esophageal and gastric acid profile and NAB. H. pylori was detected by rapid urease test and histology.

Results: NAB tended to occur more often with omeprazole than dexlansoprazole (33/41 [80.5%] vs. 23/39 [59%]; p=0.06). Though the

frequency of nocturnal EA was comparable between dexlansoprazole and omeprazole (2 [1-4] vs. 3 [1-5], p=0.12), its duration was less with the former (181.5 [15.2-334.2] vs. 283 [158-366] minutes, P=0.03) (Table 1). NAB was as frequent in H. pylori-infected than non-infected group (11/19 [57.9%] vs. 45/61 [73.8%]; p=0.1). The nocturnal gastric and esophageal pH in the H. pylori-infected group was higher than the non-infected group (4.6±1.7 vs. 4±1.6, P=0.157; 6.1 ± 0.6 vs. 5.8 ± 0.6, P=0.128). Dexlansoprazole tended to increase 24-h and nocturnal mean gastric pH among H. pylori- infected more than omeprazole (5.9 ± 1.1 vs. 4.2 ± 1.7, P=0.023; 5.7 ± 1.2 vs. 3.8 ± 1.5, P=0.006).

Conclusion: Dexlansoprazole is more effective than omeprazole in suppressing gastric acid secretion, resulting in lesser EA and NAB, particularly in the presence of H. pylori.

CONFERENCE ABSTRACTS

POSTER PAPERS

SR. NO. 3

A study on gastric myoelectrical activity and gut inflammation in the subtypes of functional dyspepsia

Shivam Sethi1, Manisha Kar2, Susama Patra3, Madhav Sameer Makashir1, Abhisek Mishra 4, Manas Kumar Panigrahi1, Subash Chandra Samal*1

1Dept of Gastroenterology,2Department of Physiology,3Department of Pathology,4 Department of Community Medicine & Family Medicine,

AllMS, Bhubaneswar, India

* Corresponding author

Background and aims: Functional dyspepsia (FD) is a common disorder with complex and poorly understood pathophysiology. The present study aims to study gastric myoelectrical activity and duodenal eosinophil count in subtypes of FD and the correlation between them. This mayhelpto diagnose the subtypes of FD objectively and open new vistas for the treatment.

Method: This is a cross sectional, observational study conducted in tertiary hospital. 14 EPS, 8 PDS and 14 overlap subgroups of FD as diagnosed by ROME IV criteriawere recruited. Each of the subjects underwent electrogastrography for 30 minutes in fasting condition and 30 minutes following 200 ml water ingestion. Biopsy from D1 and D2 were taken endoscopically and analyzed for eosinophil count per 5 HPF.

Results: Total 36 cases had equal proportion of malesand females. 25% FD had H.Pylori infection. PDS had less normal slow waves and more

bradygastria as compared to EPS and overlaps, in both fasting (51.2%±8.5 vs $40.4\%\pm9.8$ vs $43.1\%\pm18.3$, p=0.08; $4.6\%\pm5.1$ vs $6.6\%\pm4.3$ vs $5.8\%\pm9.2$, p=0.42) and fed state (53.7%±18.9 vs $50.8\%\pm24.9$ vs $52.2\%\pm24.2$, p=0.96; $3.3\%\pm4.8$ vs $5.6\%\pm4.3$ vs $3.25\%\pm4.98$, p=0.28) respectively, however the results were not statistically significant. EPS group had significantly more total duodenal eosinophils (D1+D2) as compared to PDS and overlap (38.6 ±22.8 vs 31.8 ± 22.1 vs 24.2 ± 18.9 ; p=0.046). Also, higher eosinophil count was associated with low fed fasting power ratioin EPS subtype (p=0.04). However, individual mean D1 and D2 eosinophil counts were not significantly different.

Conclusion: There was no significant difference in gastric rhythm and individual D1 and D2 eosinophils among all 3 subtypes of FD. However, EPS group had maximum total eosinophil count and lowest fed-fasting power ratio which was associated significantly. Large sample size is required for further validation of the result.



The challenges of implementing low fermentable oligo-, di-, mono-saccharides and polyol diet in India: An analysis of available data

Uzma Mustafa and Uday C. Ghoshal
Department of Gastroenterology, Sanjay Gandhi Postgraduate Institute of Medical Sciences, Raebareli Road, Lucknow 226 014, India

Background: Low fermentable oligo-, di-, monosaccharides, and polyols (FODMAP) diet is used in irritable bowel syndrome (IBS). However, data on the utility and challenges of implementing such a diet in India are scanty. Since dietary practices in India are different from other Asian and Western countries, the existing Indian data were analyzed.

Methods: This study attempted to analyze the existing Indian data on the frequency of vegetarianism, cereal (wheat vs. rice), milk/ milk product consumption, and lactose malabsorption (LM). A 5-point scale (quiet easy, easy, moderately easy, not easy, difficult) for implementation of low FODMAP diet for IBS patients was proposed based on regional dietary diversity and LM in India.

Results: Our analysis showed that vegetarianism is high in India with regional differences in frequency. Similarly, there is regional variation in frequency of LM though it is quite high in most parts of India where data are available. While southern, eastern, and north-eastern parts of the country have rice as the staple cereal, wheat is consumed more in other parts. We suggest that implementing a low FODMAP diet in north-eastern India may be most easy compared to northern India, where it may be most difficult. Implementing a low FODMAP diet in southern and eastern India may be easy, moderately easy in western India, and not easy in central India.

Conclusions: The variation in the difficulty in implementing a low FODMAP diet in India may stem from the regional food preference and differences in vegetarianism, as well as frequency of LM.

SR. NO. 5

Achalasia cardia in pediatric and adolescent subjects: clinic radiological spectrum and subtyping on high resolution manometry

Venkatesh Vaithiyam, Sanjeev Sachdeva, Ashok Dalal, Ajay Kumar, AS Puri Department of Gastroenterology, GB Pant Hospital, New Delhi (India)

Background and Aim: Achalasia cardia (AC) is uncommon in pediatric population. There is very little data regarding subtypes of this disorder in children as per the Chicago classification of esophageal pressure topography (EPT). We aimed to stu dy the clinicoradiological profile and oesophageal motor function in pediatric and adolescent patients with AC.

Methods: Clinical, radiological and manometric features of pediatric/adolescent patients (age<12, 12-18 years) with achalasia cardia were evaluated. High resolution manometry (HRM) was performed using 16-channel esophageal manometry catheter (Dentsleeve, Canada) perfused with water using a pneumatically activated manometric pump (Kangaroojef, Melbourne, Australia). Data was recorded in basal state followed by ten 5-ml water swallows in supine position. HRM criterion used for diagnosis of achalasia cardia was as per Chicago classification. Achalasia was subtyped into type I, II, and III. Upper GI Endoscopy and barium swallow/CT scan were performed prior to HRM in all subjects.

Results: Out of 57 patients, 34 (59.6%) were females. Median age was 14 (3-17) years. Clinical presentation included dysphagia in 57 (100%),

regurgitation in 43 (75.4%), retrosternal chestpain in 14 (24.6%), heartburn in 6 (10.5%) and alacrima in 2 (3.5%). Median duration of symptoms at presentation was 3 (1-7) years. Two children had triple A syndrome (Alacrima, Achalasia, Adrenal insufficiency). On HRM, 12 subjects had type I, 36 patients had type II and 9 patients had type III subtype of achalasia cardia. Patients with type III variant more often had chest pain, and had higher basal LES pressure and maximal esophageal pressurization than other variants. Barium swallow/CT showed dilated esophagus with birdbeak like GE junction in 46 (80.7%), mid/lower esophageal diverticulae in 9 (15.8%) subjects and near normal esophagram in 2 (3.5%) subjects.

Conclusions: Dysphagia, regurgitation and chest pain were the dominant presenting symptoms. History of alacrima must be given due attention in pediatric patients. Classical findings of achalasia cardia were observed in majority on imaging studies. Type II was the commonest while type III was least frequent variant in our dataset.



SR NO 6

Long-Term Gastrointestinal sequelae in Covid-19: A prospective follow-up cohort study

Rithvik Golla, Bhaskar Kante, Peeyush Kumar, Saurabh Kedia, Govind Makharia, Vineet Ahuja Department of Gastroenterology and Human Nutrition Unit, All India Institute of Medical Sciences, New Delhi, India

Introduction: A novel coronavirus (CoV) named '2019-nCoV' or '2019 novel coronavirus' or 'Covid-19' by the World Health Organization (WHO) is responsible for the current pandemic that started at the beginning of December 2019 in Wuhan City, Hubei Province, China. Many studies have shown that IBS may follow after an episode of acute gastroenteritis called as post-infectious IBS. Little is known about the long term gastro-intestinal sequelae and impact the virus may have on overall health. We prospectively studied the frequency and spectrum of PI-FGID's among Covid-19 compared with healthy controls.

Methods: 350 patients with Covid-19 admitted at AllMS, New Delhi and 350 healthy controls and 280 healthy covid serology negative controls were prospectively followed up at 1,3 and 6 months of infection using validated Rome IV criteria to evaluate the frequency of Functional GI Disorders following recovery from Covid-19 infection.

Results: The study included 350 Post Covid recovered patients, out of which 30 had lost to follow up, hence a total of 320 cases and 320 controls were analysed. An additional 280 control set-B (covid serology negative) controls were also included. In the cases group 163 were males and 157 were females. Mean age was 38.02 ± 11.4 years. In the healthy control group set-A which included family members (spouses mainly) 175 were males and 145 were females. Mean age was 37.94 ± 11.9 years which was

comparable to the cases group (p=0.87). Control set-B included 172 males and 108 females with a mean age of 38.47 \pm 11.7 years. Based on severity, 238 (74.38%) had mild, 71 (22.19%) had moderate and 11 (3.44%) had severe disease. During COVID-19 infection, among cases the predominant abdominal complaint was diarrhoea in 23 (7.21%) followed by abdominal pain in 16 (5.02%) and nausea, vomiting in 11 (3.45%). At 1 month, 36 (10.90%) among the 320 cases developed FGID symptoms. At 3 months, 27 (8.44%) persisted to have symptoms and 9 of them improved. At 6 months, another 6 of them improved and a total of 21 (6.36%) persisted to have symptoms. Out of the various reported FGIDs as per the ROME IV Questionnaire, 10 (3.12%) had FD, 9 (2.80%) had IBS, 5 (1.5%) had FD-IBS overlap, 3 (0.93%) had FC, 9 (2.81%) had FD and 2 (0.62%) had FAB/D. Among the healthy controls in both set-A and B, none developed any gastrointestinal complaints at 6 months of follow up (p<0.01). Among the cases which developed FGID, risk factors for development of Post Covid-19 FGIDs at 3 months included severity of infection (p=0.01), presence of GI symptoms at time of infection and at 1 month (p<0.01). Among the symptomatic at 3 months, 9 (33.3%) out of the 27 were positive for D-xylose and 1 (3.7%) was positive for H2 breath test.

Conclusion: This study shows that Covid-19 alike other acute G.I infections can lead to development of PI-FGID.



Jackhammer esophagus: Clinicoradiological Spectrum and characteristics on high resolution manometry

Venkatesh Vaithiyam, Sanjeev Sachdeva, Ashok Dalal, Ajay Kumar, AS Puri Department of Gastroenterology, GB Pant Hospital, New Delhi (India)

Background and Aim: Jackhammer esophagus (JE) is an uncommon motility disorder. This extreme phenotype of hypercontractility has been brought to the spotlight by the Chicago classification of esophageal pressure topography (EPT). We aimed to study the clinical profile and oesophageal motor function in patients with JE.

Methods: Clinical and manometric features of 21 patients with Jackhammer esophagus were evaluated. High resolution manometry (HRM) was performed using 16-channel esophageal manometry catheter (Dentsleeve, Canada) perfused with water using a pneumatically activated manometric pump (Kangaroojef, Melbourne, Australia). Data was recorded in basal state followed by ten 5-ml water swallows in supine position. HRM criterion used for diagnosis of JE was presence of at least a single propagated swallow with distal contractile integral (DCI) of > 8000 mmHgcm-s, with all other HRM study parameters being normal. Upper GI Endoscopy and barium swallow were performed prior to HRM in all subjects.

Results: Out of 21 patients, 14 (66.7%) were females. Median age was 39 (21-72) years. Clinical presentation included dysphagia in 21 (100%), retrosternal chest pain in 20 (95.2%), heartburn in 11 (52.4%), globus sensation in 6 (28.8%) and recurrent hiccoughs in 4 (19.04%). Median duration of symptoms at presentation was 5 (1-14) years. All patients had normal basal lower esophageal sphincter (LES) pressure, integrated relaxation pressure (IRP), and distal latency (DL). Median maximal DCI was 11042 (8906-13917) mmHg-cm-s. High DCI (hypercontractility) was associated with multipeaked contractions in 19 (90.5%) patients. Barium swallow showed evidence of esophageal diverticulae in 13 (61.9%) patients.

Conclusions: In our experience with JE, dysphagia and chest pain were the dominant presenting symptoms. Esophageal contractions with very high DCI and multipeaked morphology were the HRM hallmarks while esophageal diverticulae were present in majority of contrast esophagograms.

SR. NO. 8



Biofeedback therapy for patients with dyssynergic defecation: experience from a tertiary center in north India

Rajat Kalra, Shrihari Anil Anikhindi, Anil Arora Sir Ganga Ram Hospital, Delhi

Background: Dyssynergic defecation (DD) is the most common cause of functional constipation. Biofeedback therapy (BFT) is an established modality of treatment for patients having DD. Despite its documented success, it has been scarcely reported in Indian studies. We report ourexperience of BFT in patients with DD.

Materials and Methods: Consecutive patients who underwent BFT for DD in past 6 months in our gastrointestinal motility laboratory were included in study. All patients underwent baseline anorectal manometry (ARM) with a 16-channel water perfused high resolution manometry system. For those with DD, BFT was done using manometry-based technique on weekly/twice weekly schedule, each session lasting 20-30 minutes. Maximum 4 sessions done before result analysis. Baseline and post BFT symptom diary and manometry parameters were evaluated.

Results: Thirty patients [median age 30 years (16-74)] were included in study. Median symptom duration was 2 years (range 1-20); with 43% patients on >= 2 laxatives. Type I DD was most common (83%). A median of 3 BFT sessions was done; 53% completed all 4 sessions. There was a significant improvement in all stool related symptoms post BFT. Significant fall in anal sphincter pressures was seen [pre vs post BFT, 101(29-142) vs 65(28-162) mm Hg]; although rise in rectal pressures was not achieved post BFT [pre vs post BFT, 52(20-158) mm Hg vs 51(30-130)] mm Hg. Defecation index (DI) was significantly better post BFT (0.89 vs 0.58, p = 0.006). Younger patients showed more likelihood to improve DI by >50% (28 vs 42, p =0.03).

Conclusion: BFT yields excellent results in patients with DD. Younger patients especially have better outcomes. Availability and expertise of BFT needs to increase in India to cater for the large population of patients with DD.



P iı

Prevalence of functional dyspepsia-like symptoms in ulcerative colitis patients in clinical remission

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Functional dyspepsia (FD) is classified as a functional GI disorder (FGID), a common condition diagnosed based on symptom-related criteria. Prevalence of FD in general population is quite significant in India and majority of patients seen in gastroenterology speciality comprise of such patients which are challenging to treat symptomatically. Ulcerative Colitis (UC) is chronic, relapsing remitting and disabling disorder. Prevalence of FD in UC patients in remission has not been studied but many such patients still describe gastric complaints which are not related to UC but is attributed to FGID. We present here out data on Prevalence of FD in UC patients with clinically quiescent disease.

The data was retrospectively evaluated from clinical record of UC patients from March 2019 to 2022. Diagnosis of FD was made based on FD-like symptoms given by patient and whose Upper gastrointestinal endoscopy (UGIE) was done and came out to be normal thus eliminating organic

disorder. Total number of patients were 295 of which Male - 175 (60%); Female - 120 (40%); Age group 20-40 years: 143 patients; 40-60 years: 112 patients; 60-80 years: 40 patients. Of total Ulcerative Colitis (UC) patients i.e., 210, 68 had E1 disease, 92 had E2 disease and 50 had E3 disease. Of patients within remission (i.e., 200), 68 had E1 disease, 88 E2 disease and 44 had E3 disease. Of patients in remission, 23 (11.5%) had FD-like symptoms i.e., Post prandial fullness (20); early satiety (11); epigastric pain (8), epigastric burning (23). Lab parameters were Median Haemoglobin-10.8gm/dl; Median Serum albumin- 3.8gm/dl; UGIE- Normal study (in patients with dyspeptic symptoms).

The prevalence of functional dyspepsia (FD) has been noted to vary between 11-29.2% in general population globally and according to our data analysis we concluded that prevalence of FD in clinically remitted UC patients was comparable to that of general population.

SR. NO. 10

ORMDL3 regulates mitochondrial dynamics and dictates ulcerative colitis pathogenesis.

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Background: Crohn's disease (CD) and ulcerative colitis (UC), the main clinical phenotypes of inflammatory bowel disease (IBD), are complex diseases arising from the inter-play of genes that regulate immune function with the environment. We and others have shown that in the susceptible host, an altered gut flora leads to unbalanced cytokine production and tight junction dysfunction resulting in chronic inflammation and pain in the intestine. Endoplasmic reticulum (ER) stress occurs upon accumulation of misfolded or unfolded proteins in the ER, which initiates the unfolded protein response (UPR) and leads to proinflammatory cytokine production. IBD GWAS have shown close association of ER stress related proteins like ATG16L1, XBP1 and ORMDL3 (ORMDL Sphingolipid Biosynthesis Regulator 3) with IBD susceptibility implicating further work is needed to understand role of ER stress in IBD pathophysiology.

Objective: Several single nucleotide polymorphisms in ORMLD3 have been associated with both CD and UC risk in the patients. ORMDL3 regulates ceramide metabolism, inflammatory reactions, autophagy, apoptosis and B lymphocyte fate determination. However, no study till date described the role of ORMDL3 in regulating bacterial pattern receptor ligand induced cytokine production and the functional study of ORMDL3 polymorphisms in conferring IBD risk is lacking.

Hypothesis: Our central hypothesis is that ER stress during IBD induces pro-inflammatory response in the intestinal epithelial cells and macrophages which will involve mitochondrial dysfunction, another well documented phenomenon in the UC patients. We believe that ORMDL3, a IBD susceptibility gene will have real impact on deciding the immune outcome in the macrophages/DC and IEC population by regulating ERmitochondrial function.

Results: We found ORMDL3 protein expression is reduced in the colon biopsy tissues from the patients with UC when compared to the non-UC controls. ORMDL3 knockdown in human monocytes leads to reduced inflammatory cytokine production. ORMDL3 was additionally found to localize in mitochondria associated membrane (MAM) which is very important for mitochondrial function, mitochondrial dynamics and mitochondrial quality control pathways. Further, ORMDL3 overexpressing HeLa cells displayed more elongated mitochondria suggesting both ER and mitochondrial Unfolded protein response is regulated by ORMDL3.

Conclusion: Reduced ORMDL3 level in the UC patients might account for the dysfunctional ER and mitochondrial UPR, which is highly clinically relevant during UC pathogenesis. Therapeutics endowed with ORMDL3 activators might help to address multiple mitochondrial-related immune disorders including UC.



Small intestinal bacterial overgrowth and intestinal inflammation in patients with irritable bowel syndrome

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Introduction: Irritable bowel syndrome (IBS) is a common gastrointestinal disorder with multi-factorial pathophysiology. Role of intestinal inflammation, altered microbiome, and bacterial overgrowth in the pathogenesis of IBS needs investigation.

Aim: To study the prevalence and correlation between small intestinal bacterial overgrowth (SIBO) and fecal calprotectin (FC) in IBS patients in northern India. Methods: This prospective study enrolled consecutive IBS patients (Rome IV). SIBO was diagnosed using GHBT. Fecal calprotectin was measured for evaluation of intestinal inflammation. Relationship of these factors with IBS symptom score (IBS-SSS) and quality of life scores (IBS-QOL) was studied.

Results: Total 112 IBS patients (mean age 35.8 ± 11.9 years; male:female - 1.9:1) were included. Mean duration of symptoms was 2.7 ± 2.5 years.

Baseline mean IBS-SSS score was 215.2 \pm 66.6 and mean IBS-QOL score was 66.7 \pm 15.0. SIBO was present in 32.1% patients, while FC was raised (>50 \boxtimes g/g) in 27.7% patients. Significantly higher number of SIBO positive IBS patients had raised FC [29/36;(80.6%)], as compared to SIBO negative patients (p =0.001). Mean IBS-SSS and IBS-QOL were significantly higher in IBS patients who had SIBO or raised FC. Patients with SIBO or raised FC received Rifaximin for 2 weeks by the primary physician. At 12 weeks follow-up, these patients reported significant improvement in IBS-SSS and IBS-OOL scores.

Conclusion: SIBO was present in 32.1% of IBS patients, while FC was raised in 27.7% patients. Significantly higher number of SIBO positive IBS patients had raised FC. Mean IBS-SSS and IBS-QOL were significantly higher in IBS patients with SIBO or raised FC; and these scores improved after treatment.

SR. NO. 12

Enteral and parenteral nutrition in critically ill patients with small intestinal failure

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Intestinal failure - often associated with insufficient length or function of the intestine is a state of inability to maintain protein-energy, fluid, electrolyte, or micronutrient balance resulting from bowel resection or obstruction, dysmotility, congenital gastrointestinal defects, or loss of absorption as a consequence of disease. Acute intestinal failure (types 1 and 2) is the initial phase of the illness and may last for weeks to a few months, and chronic intestinal failure (type 3) from months to years often affects about 50 per million people and compromises their quality of lives. The cause of intestinal failures is linked to multiple factors at the very onset of its presentation: congenital versus acquired (gastroschisis versus surgical complications); the speed of onset - rapid versus prolonged (mesenteric ischemia versus Crohn's disease or chronic intestinal pseudoobstruction); underlying pathology (benign versus malignant); the locality (limited to gastrointestinal tract versus systemic disease); and duration (short-term versus long-term). Based on available functional anatomy and adaptation over time, chronic intestinal failure is often reversible, though, most patients require long-term various nutritional support - parenteral being the mainstay among them. Overall nutritional therapy ranges from dietary formulations with various nutritional elements (macronutrients,

micronutrients, fluid, electrolytes, vitamins, etc.) in balanced combinations to reduce complications and pharmacologic therapies involving hormonal interventions to enhance the existing functional status of the gut. In this context, Home Parenteral Nutrition is the mainstay of treatment for severe intestinal failure- albeit with side effects such as venous access site infection, catheter block, intestinal failure associated with liver disease, and other physiological impairments. From a nutrition perspective, the ultimate goal is to provide adequate caloric requirements and to make the transition from parenteral to full enteral nutrition successful. However, the journey on this road is not always smooth and steps include modified enteral feeding formulas, the inclusion of various gut-oriented hormonal therapy, bowel surgeries to facilitate bowel adaptation to the new situation- and lastly intestinal transplantation in selective cases. Over the years, multidisciplinary approaches involving various medical and surgical rehabilitative methods have improved the survival of intestinal failure patients; yet, 19 to 26% of patients tend to continue parenteral therapy with a mortality of around 13 to 38% over 5 years after the development of intestinal failure. The maximum benefit can be achieved with care from specialized intestinal rehabilitation centers.



Spectra and psychological profile of Rome IV disorders of gut—brain interaction among out-patients in northern India

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Background: Disorders of gut brain interaction (DGBI), are the most prevalent disorders in gastroenterology. They are commonly associated with psychological co-morbidities and impairment in health-related quality of life. Indian data on the prevalence of DGBIs, the overlap, and the associated psychological co-morbidities is scarce. Aim:To study the spectra and psychological profile of Rome IV DGBIs among out-patients in northern India

Methods: Consecutive patients presenting to gastroenterology outpatient department of a tertiary care institute between May 2019 to October 2019 were enrolled. Rome IV Diagnostic Questionnaire (English/Hindi) was used to diagnose DGBIs. DASS questionnaire (English/Hindi) was used to assess depression, anxiety and stress.

Results: Of the total 2547 patients screened, 1044 (40.9%) had DGBIs. Mean age was 41.8 ± 12.6 years and 51.9% were males. Most common DGBIs were

functional dyspepsia (FD) (44.3%), esophageal disorders (ED) (34.9%), irritable bowel syndrome (IBS) (16.1%), functional constipation (15.6%), functional abdominal bloating/abdominal distension (7.5%), nausea and vomiting (6.3%), centrally mediated abdominal pain syndrome (4.6%), and functional diarrhoea (2.8%). Co-existing DGBIs were present in 394 (37.7%) patients. Out of total FD patients (n=463), 52 (11.2%) had co-existing IBS, while 103 (22.4%) had co-existing ED. Prevalence of anxiety, depression and stress were 74.5% (n=778), 42.4% (n=443) and 31.3% (n=327) respectively.

Conclusion: Rome IV DGBIs are common among out-patients in northern India, most common being functional dyspepsia, esophageal disorders, irritable bowel syndrome and functional constipation. More than one-third patients have co-existing DGBIs. Anxiety, depression and stress are reported by majority of the patients.

SR. NO. 14

Efficacy of biofeedback therapy based on subtype of pelvic floor dyssynergia

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Introduction: There are several randomised control trial which have demonstrated that biofeedback is safe and effective treatment of dyssynergia, but study on outcome in each subtype of pelvic floor dyssynergia is lacking in India. We therefore conducted a prospective study to evaluate efficacy of biofeedback and its outcome on diff subtype of pelvic floor dyssynergia.

Method: All patient age > 18 years diagnosed as pelvic floor dyssynergia by anorectal manometry were enrolled in out study after written informed consent. Total 50 patients (male: female 1:1) with pelvic floor dyssynegia were included. Demography, clinical and relevant lab data were recorded. The patient biofeedback therapy was planned based on the subtype of pelvic floor dyssynergia giving emphasis on the deficiency in defecation pattern, the change in mean constipation score was evaluated.

Result: Total 50 patient included in study 25 (50%) were male and 25 (50%) were female. Mean Age of all patient was 40.32 + /- 13-40 years. We found most common pelvic floor dyssynegia type 3 followed by Type 1. We found overall 90% of the patients of the biofeedback therapy showed subjective improvement in their constipation symptoms, All symptoms including straining, lumpy and hard stool, incomplete evaluation, digital evacuation and sensation of anorectal blockage significantly decreased (p < 0.001). Mean constipation score was significantly decreased from 16.56. +/-0.30 to

Conclusion: Biofeedback therapy based on subtype of pelvic floor dyssynergia have 90 % efficacy.



Study of esophageal motor disorders in patients undergoing lung transplant evaluation

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Introduction: Lung transplantation (LTx) is a viable option for most patients with end-stage lung diseases. Esophageal motor disorders (EMD) are frequent in candidates for LTx. GERD is also associated with EMD. Esophageal high-resolution manometry (HRM) allows a better characterization of EMD and esophagogastric junction (EGJ) morphology. Esophageal peristaltic abnormalities are observed in patients who have had rejection post lung transplantation.

Aim: To assess esophageal motor disorders by high resolution manometry (HRM) in patients being worked up for lung transplantation.

Study: HRM was performed in 40 patients undergoing pre transplant evaluation. HRM plots were analysed according to the Chicago classification 3.0

Results: 29 (72.5%) patients were male with mean age of 48 years and 11 (27.5%) were female with mean age of 46 years. Ineffective motility was found in 8 patients (20%) with interstitial lung disease (3 males, 5 females). Hypotensive LES mechanism was found in 4 (10%) male patients (3 with ILD and 1 with idiopathic pulmonary fibrosis). 1 patient (2.5%) had achalasia type 1 with post covid lung fibrosis. 27 patients (67.5%) had normal manometry.

Conclusion: Significant changes (22.5 %) in esophageal motility were observed in patients with end stage lung disease. There are studies showing that EMD were more frequent in the group of patients that experienced organ rejection compared to the non-rejection group. EMD leading to an impaired esophageal clearance should be considered as an additional factor that contributes to LTx failure.

SR. NO. 10

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Small intestinal bacterial overgrowth in chronic pancreatitis: A systematic review and meta-analysis

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Introduction: Various mechanisms predispose chronic pancreatitis (CP) patients to small intestinal bacterial overgrowth (SIBO).Reported prevalence of SIBO in CP is between 0%-92%.

Methodology: Extensive literature search of pubmed, google scholar and Scopus performed using pre-specified search strategy till June 2021. Excluding CP patients with post surgical anatomy and SIBO diagnosis using lactulose hydrogen breath test. Registered in PROSPERO (ID: CRD42021266031).

Results: SIBO was more common in patients with CP compared to controls (Odds ratio [OR] 5.6; 95% confidence interval [CI] 2.7-11.5). No difference in frequency of SIBO among alcoholic as compared to non-alcoholic CP (OR 0.90 [95% CI 0.5-1.7]). SIBO was 2.4 (95% CI 1.4-4.2) and 2.7 (95% CI 1.4-4.2) times more common among those with diabetes and pancreatic exocrine insufficiency, respectively.

Conclusion: Patients with CP have SIBO more commonly as compared to controls and the risk is more in patients with endocrine and exocrine insufficiency than those without and does not depend on etiology of CP.



Comparing the psychosocial health and quality of life in patients with ulcerative colitis and functional gastrointestinal disorders

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Background: Patients with inflammatory bowel disease (IBD) after control of their disease activity may continue to have persistent symptoms fulfilling the criteria for functional gastrointestinal disorders (FGID). These FGID symptoms may be associated with poorer quality of life. Moreover, patients with active IBD may have poor quality of life because of their severe symptoms. Accordingly, we studied the psychological issues and quality of life among patients with ulcerative colitis those with FGID and healthy control.

Method: Quality of life and psychological issues were assessed using world health organization quality of life-BREF (WHOQOL-BREF) and Rome III psychosocial alarm questionnaire, respectively. Data were obtained from 225 participants (100 UC patients, 100 FGID patients and 25 healthy controls). Severity of UC was assessed using ulcerative colitis disease activity index (UCDAI) and Truelove and Witt's severity index.

Result: Of 225 subjects, 100 UC patients (median age 36 years, range [28.0-48.7]; 47 [47%] male) 100 FGID patients (median age 38 years, range [29.0-

51.0]; 44 [44%] male), and 25 controls (median age 29 years, range [27-41], 15 [60%] male) had significant differences in all the four domains of WHOQOL-BREF: physical (median scores and range, 53.57 [42.85-53.57] vs. 53.57 [43.7-64.2] vs. 53.75 [50.0-62.5]; p=0.026), psychological (median scores and range, 54.16 [45.8-54.1] vs. 50.0 [37.5-62.5] vs. 66.87 [64.6-70.6]; p<0.001), social relationship (median scores and range, 66.6 [58.3-75.0] vs. 75.0 [66.0-75.0] vs. 75.0 [50.0-87.5]; p<0.001) and environment scores (median scores and range, 50.0 [46.8-59.3] vs. 59.37 [56.2-65.6] vs. 65.6 (53.1-78.1); p<0.001). The psychological QOL scores of FGID and IBD patients were comparable, whereas the parameters of Rome III psychosocial alarm questionnaire: depression, severity of body pain, impairment and impaired coping were lower in FGID patients. The suicidal tendency parameter of psychosocial alarm was higher in FGID as compared to IBD.

Conclusion: UC patients in relapse have poorer social relationship and environment domain of QOL than FGID. Psychosocial alarm parameters are also greater in UC patients than FGID.

SR. NO. 18

Rectal Manometry in evaluation of Chronic Constipation-The First Line test?

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Introduction: Chronic Constipation is one of the commonest symptoms in a gastroenterology practice, and it's appropriate evaluation is often ignored. Patients usually visit after years of laxative abuse and multiple colonoscopies. We evaluated the role of anorectal manometry (ARM) in chronic constipation in such patients.

Method: Retrospective analysis was conducted for the evaluation of chronic constipation and manometries performed over a period of 1 year and 6 months were analysed and all were performed by the same gastroenterologist. A total of 129 ARM were performed in the mentioned time period. Prior to conducting the study a detailed history, clinical examination, digital rectal examination were performed and patients were classified as per standard criteria and London classification Patients were counselled regarding the indication for the procedure and all efforts were made to keep the patients comfortable during the procedure. All ARMs were done as per IAPWG protocol and classified using London Classification. All ARMs were done either on MMS Water perfused Anorectal Catheter on Solar GI HRM by Laborie or RMH Australia Water perfused equipment using Trace GI Software for analysis.

Results: The median age was 39 years(range 6 years - 86 years) and the majority of the patients were male(56.6%). In our study, 63 patients(48.8%),

the majority ,had disorders of rectoanal coordination closely followed by 22 patients(17%) with anal tone and contractility disorders. 11(8.5%) had rectal sensation pathology. 1 patient (0.7%) was diagnosed with disorders of RAIR. Remaining 33 patients(25.5%) had normal manometry thereby ruling out evacuation disorders in them. The baseline anal pressures were slightly higher in males(78.19 mmhg) vs females(69.28mmhg). Anal canal length in males was 3.28cms and in females was around 3 cms. Average squeeze pressures were higher in males (143.5mmhg) in comparison to females(127.29mmhg). First sensation of balloon was at 52.5 ml for males and 57.31ml for females. First rectal urge was at 120 ml for males and 110 ml for females. Males had lower push relaxation than females. BET times were also longer in males.

Conclusion: Almost 75% of patients with chronic constipation had abnormalities on Anorectal manometry. ARM is also minimally invasive and can be done as an outpatient procedure. This in absence of alarm signs and symptoms, should make Anorectal manometry as first line test for evaluation of Chronic constipation particularly when evacuation disorder is being considered which is the commonest pathology in chronic constipation.



Spectrum of IBS symptoms in ulcerative colitis patients in remission

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Irritable bowel syndrome (IBS) and inflammatory bowel disease (IBD) are common, chronic, relapsing, and potentially disabling disorders. They are seen in young adults in the prime of their lives and as a consequence may cause considerable emotional, personal, and socioeconomic burden. Their management requires considerable clinical acumen and an obligatory commitment to various aspect of the patient–doctor relationship. There is little evidence that those with confirmed diagnosis of IBS (in contrast to those with IBS-type symptoms in which IBD may have been missed can evolve into IBD. If IBS and IBD are distinct entities, then can they co-exist and lead to diagnostic confusion for the clinician? The considerable overlap of symptoms and colitis raises the questions of whether IBS is a prodromal or mild subset of IBD, or whether IBD is pathologically related to the cause of IBS, or do they even represent the same pathophysiological spectrum of a disease. We present here our data on overlap of IBS symptoms in IBD.

Retrospective data from IBD clinical records were evaluated for same. Data analysed was from March 2019-2022. Total number of patients were 295 of which Male - 175 (60%); Female - 120 (40%); Age group 20-40 years: 143 patients; 40-60 years: 112 patients; 60-80 years: 40 patients of total Ulcerative Colitis (UC) patients i.e., 210, 68 had E1 disease, 92 had E2 disease and 50 had E3 disease. Of patients within remission (i.e., 200), 68 had E1 disease, 88 E2 disease and 44 had E3 disease. Of patients in remission, 89 (44.5%) had IBS like symptoms i.e., Pain abdomen (42); feeling of incomplete evacuation (89); relief in pain on defecation (65), Mucus in stool (70). Lab parameters were Median Haemoglobin-12gm/dl; Median Serum albumin- 3.7gm/dl; Median Faecal calprotectin- 9ug/mg; Stool routine microscopy-within normal limits; Median TSH levels- 2.2 mIU/L and Median RBS levels- 98mg/dl. Since all parameters were within normal limits in remission patients that supports over diagnosis of IBS in them.and this concludes that IBD patients can have IBS like symptoms.

SR. NO. 20

Gut-Brain Dysfunction in various subgroups of functional dyspepsia

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Background and aims: Functional dyspepsia (FD) is a common ailment with a gap in knowledge regarding pathophysiology. The present study aims to analyze gastric emptying time, regional cerebral blood perfusion using SPECT imaging, psychiatric abnormalities in different subgroups of FD and the correlation between them. Subdividing FD patients according to the predominant symptomatology may identify subgroups with a homogenous underlying pathophysiology.

Method: This is a cross sectional, observational study conducted in a tertiary hospital. 11 EPS, 6 PDS and 15 overlap subgroups of FD as diagnosed by ROME IV criteria were included. Each subject underwent gastric emptying scintigraphy using a vegetarian meal consisting of idli labeled with 99mTc sulfur colloid (99mTc-SC) and brain SPECT (single photon emission computed tomography). Psychiatric assessment was done using DCPR-R-SSI (diagnostic criteria for psychosomatic research revised semistructured interview) and PHQ-9 (patient health questionnaire).

Results: Total 32 cases had an overall mean t1/2 (gastric half emptying time) of 57.6 minutes (range 20-134.2 minutes). EPS, PDS and overlap

subgroups had a mean t1/2 of 58.2, 55.8 and 57.8 minutes, respectively. The difference between the three subgroups was not statistically significant (p=0.96). There was no significant difference in regional cerebral blood perfusion using SPECT among the 3 subgroups. 59.3% of the patients had atleast mild depression on PHQ-9 questionnaire. Overall, most common DCPR syndromes were health anxiety (present in 75% of subjects), persistent somatization (78%), anniversary reaction (69%), irritable mood (66%) and type A behavior (63%). However, neither the severity of depression nor the presence of specific DCPR syndromes was associated with any of the subgroups. Decreased regional cerebral perfusion in right lateral prefrontal cortex was significantly associated with presence of conversion symptoms (p=0.010). There was no significant difference in gastric emptying, regional cerebral blood perfusion, severity of depression and presence of DCPR psychological syndromes among all 3 subtypes of FD. However, a large number of dyspeptic patients had depression, health anxiety, persistent somatization, anniversary reaction, irritable mood and type A behavior. Decreased regional cerebral perfusion in right lateral prefrontal cortex was associated with presence of conversion symptoms. Large sample size is needed for further validation of the result.



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Faster Small Bowel Transit Time Leads to Poorer Diagnostic Yield in Patients Undergoing Capsule Endoscopy Study

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Background: There is scarce data on the effect of small bowel transit time (SBTT) on diagnostic yield during video capsule endoscopy (VCE). Our study aim was to assess the effect of SBTT on the likelihood of detecting intestinal pathology during VCE.

Methods: We retrospectively reviewed data on VCE studies performed at Sir Ganga Ram Hospital, New Delhi, India from January 2015 to January 2018. The indications for VCE and its diagnostic yield were recorded. Age, gender, study indication, and SBTT were studied as candidate factors affecting diagnostic yield. All patients received similar bowel preparation with polyethylene glycol, and none of the patients received any prokinetics. Patients who did not achieve completion were considered to have SBTT > 9 hours (battery life).

Results: Total 438 patients were assessed; however, 2 patients were excluded as their capsules remained retained in the stomach. Hence 436 patients were included. The completion rate up to cecum was 83%

(364/436). The mean SBTT in patients who had complete examination was 283 (±143) minutes. The indications for VCE were: obscure GI bleed 52%, pain abdomen 25%, suspected small bowel inflammatory bowel disease 12%, chronic diarrhea 7%, and miscellaneous 4%. The diagnostic yield was 53% (233/436). The diagnostic yield depended on the indication and was highest for chronic diarrhea group (62%) and lowest for miscellaneous group (20%). Apart from indication the only other factor that influenced diagnostic yield was SBTT: patients with SBTT <300 minutes were less likely to have diagnostic yield compared to patients with SBTT≥300 minutes (47% vs 60%, p=0.009). Age and gender did not influence diagnostic yield.

Conclusion: Shorter SBTT during VCE (<300 minutes) is associated with a poorer diagnostic yield. This may be due to a negative effect on image quality due to a faster small bowel transit. Thus, use of prokinetic agents during VCE might adversely impact the diagnostic yield and should be discouraged.

SR. NO. 22



Study of pH impedence in esophageal motor disorders for patients undergoing lung transplant evaluation

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Introduction: Abnormal esophageal physiology, particularly esophageal hypomotility and gastroesophageal reflux disease (GERD) are potential contributors to abnormal graft function after lung transplantation. 24 hour pH impedence testing helps evaluate reflux patterns.

Aim: To analyse reflux patterns by 24 hour pH impedance in patients with esophageal motor disorders being worked up for lung transplantation.

Study: 24 hour pH impedance was performed in patients being evaluated for lung transplantation. The catheter was passed into the esophagus transnasally and positioned with the distal pH electrode, 5 cm above the lower esophageal sphincter (LES). During the 24-h study, various pH and impedance parameters were evaluated.

Result: Out of 40 patients being evaluated for lung transplantation. 14 patients (35 %) had esophageal motor dysfunction on manometry. These

patients underwent 24 hour pH impedance study. 2 patients had normal reflux < 48/24 hr, while 12 (85.7%) had abnormality in the study. The mean number of reflux episodes observed were 126 (range 56-218) over 24 hours. 40.6% of reflux occurred in supine position and 59.3% occurred in upright position. 88.5% reflux were non acidic and 11.5% were acidic. 37.43 percent of total reflux episodes having proximal migration, indicating large volume reflux. The percentage of time distal esophageal pH < 4 and Demeester score were normal as the patients were on PPI. The symptom index was evaluated for heartburn, belching and regurgitation, it was significant for belching (58.3%) in most of the patients.

Conclusion: Our study suggests that patients with esophageal motor disorders being evaluated for lung transplantation have significant reflux episodes and may have higher risk for post transplantation allograft dysfunction.



Comparison of 24-hour pH-metry and impedance monitoring for diagnosis of gastroesophageal reflux disease: a retrospective analysis

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Introduction: Current gold standard for the diagnosis of gastroesophageal reflux disease (GERD) is 24-h pH-metry. However, 24-h pH-metry fails to detect non-acidic reflux. There has been concern on sensitivity of 24-h pH-metry monitoring alone (both catheter-based and BRAVO capsule) compared to 24-h impedance monitoring, especially, if gastric acid secretion is low due to reduced parietal cell mass, Helicobacter pylori induced gastric atrophy and antisecretory therapy. Accordingly, we aimed to analyse the diagnostic ability of 24-h pH- metry as compared to 24-h impedance monitoring in relation to gastric acid levels for patients off-antisecretory therapy.

Methods: A retrospective analysis of prospectively collected data of 91 patients with suspected GERD referred to the GI Pathophysiology & Motility Laboratory for 24-h pH impedance study was done.

Results: Among 91 patients [56(61.5%) males], 73 (80.2%) had confirmed GERD either by pH-metry alone [10(11%.0)], impedance monitoring alone

[25(27.5%)] or both [38(41.8%)]. Reflux of gastric contents was detected by pH-metry and impedance monitoring in 48(52.7%) and 63(69.2%) of patients respectively (p=0.022). Among 48 patients, who were diagnosed with GERD by pH-metry, 12(13.2%) had reflux in supine posture, 4(4.4%) had reflux in upright posture while 32(35.1%) had reflux in both positions. Among 63 patients diagnosed with GERD by impedance monitoring, 5(5.5%) had reflux in supine posture, 13(14.3%) had reflux in upright posture, while 45(49.5%) had reflux in both positions. The mean gastric pH in patients of GERD detected by pH-metry alone (2.34 \pm 1.36), impedance monitoring alone (2.02 \pm 1.59) and both (1.57 \pm 0.91) were comparable (p=0.247). The percentage time of gastric pH <4 in patients of GERD detected by pH-metry alone (82.47 \pm 22.30), impedance monitoring alone (82.62 \pm 27.23) and both (91.42 \pm 11.68) were also comparable (p=0.228).

Conclusion: 24-h impedance monitoring picks up GERD more often than 24-h pH-metry with comparable gastric acid levels in patients who are not on antisecretory therapy.

SR. NO. 24

Proton pump inhibitor therapy in patients with erosive esophagitis — A real world scenario

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Background: Gastroesophageal reflux disease (GERD) has three classical phenotypes namely erosive esophagitis (EE), non erosive reflux disease and Barrett's esophagus. Patients with GERD are managed with lifestyle changes, dietary interventions and proton pump inhibitors (PPI).

Aim: To determine patterns of PPI use in patients with documented EE.

Methods: This prospective study recruited all patients with symptoms of GERD (heartburn and /or regurgitation with or without chest pain) and documented significant reflux esophagitis (Los Angeles grading LA-B or beyond on endoscopy). Lifestyle, dietary changes were initiated and all patients were prescribed twice daily PPI for 8 weeks. PPI was tapered as the requirement beyond 8 weeks. Follow up was done at weeks 8, 12 and 24. The outcomes analysed included number of patients where complete PPI withdrawal was possible at week 24 and determinants of continued PPI use at 24 weeks of therapy. Statistical analysis-Chi-square test, Mann-Whitney

U-test, sensitivity, specificity, positive likelihood ratio, negative likelihood ratio. P < 0.05 was considered as statistically significant.

Results: The study cohort included 53 patients- 42 with reflux esophagitis LA-B and 11 with reflux esophagitis LA-C [median age 46 years (22-77 years); 28 (52.3%)males]. There was significant difference in consumption pattern of PPI between week 12 and 24 (p 0.008). At week 12, 15.1% were off PPI and 67% required intermittent dosing. At week 24, 45.3% of cases were off PPI therapy and 43.4% required intermittent dosing. Only 11.3% patients continued drug use at once a day dosing. Lower BMI (p 0.01) and age (p 0.01) were linked with complete PPI withdrawal at week 24.

Conclusion: The present study highlights that PPI withdrawal is possible in 15.1% and 45.3% cases with EE after week 12 and week 24 of therapy respectively. Lower BMI & age are likely to be associated with PPI withdrawal at week 24.



Study of patient and stool subtype based on Bristol stool scale (BSS) in patient with chronic constipation

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Introduction: We conducted a prospective observational study to evaluate patient clinical profile and stool subtype base on bristol stool score in patient with chronic constipation.

Methods: All patients age more than 18yrs diagnosed as chronic constipation included in study, total 100 patient (male to female 1:1) with chronic constipation were included in the study, Demographic, clinical and relevant laboratory data were recorded. Complete history physical examination and bristol stool score were noted.

Result: Total 100 patient were included in study, 50 (50%) were male and 50 (50%) were female, most are the patient have age group of 41-60 years .We found most our patient Have Bristol stool type of 3 (88%) followed by type 2 (10%) and type 4 (2%).

Conclusion: Most common stool subtype in our patient was Type 3.

SR. NO. 26

Prevalence of Dyssynergia in children with chronic constipation and effectiveness of biofeedback therapy: An initial experience from India

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286 children with chronic constipation for 3 months were screened and 37 were labelled as refractory constipation after adequate laxative therapy of 3 months. 30 underwent anal manometry. 5.2% (15 of 286 children with chronic constipation) were diagnosed as dyssynergia. Biofeedback

therapy was offered. Response evaluation at 12 weeks showed good results. Biofeedback therapy is effective and underutilized modality in children with dyssynergia and needs further evaluation.

SR. NO. 27

Prevalence of overlapping of FGID and IBS in northern India

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Background/purpose: There is scarcity of data on prevalence, overlap, and risk factors for functional gastrointestinal disorders (FGID) by Rome IV criteria. We evaluated these factors among male and female patients.

Methods: Rome IV Diagnostic Questionnaire (for all FGIDs), Rome III questionnaire (for irritable bowel syndrome [IBS] were used.

Results: A total of 150 patients were included 75 male, female 75. Prevalence of Rome IV FGIDs was 50 %, significantly higher among females

compared with males (30% vs. 20%; p < 0.001). FGID overlap was present in 50%, most common being FD-IBS overlap (45%).

Conclusion: Rome IV FGIDs were present among 50% patients with preponderance among females. Rome IV criteria led to a reduction in IBS prevalence and increase in FDr and FC prevalence. Dietary factors, physical activity, anxiety, and insomnia affected FGID prevalence.



Polyethylene glycol (PEG) 3350 plus electrolyte is an alternative therapy for patient suffering from IBS-C

Amit Prakash Srivastava, Namrata Nigam and Dilsad Rizvi Era Medical college, Lucknow

Objective: Polyethylene glycol (PEG) 3350 plus electrolytes (PEG 3350+E) is a well-known medication for constipation, and it has been advocated as a treatment option for constipation caused by ir ritable bowel syndrome (1BS-C). The purpose of this study was to examine the efficacy and safety of PEG 3350+E vs. placebo in adult 1BS-C patients.

Methodology: Patients with confirmed IBS-C were randomised to receive PEG 3350+E (N=60) or placebo (N=710) for 28 days a fter a 14-day run-in period wit hout study medication. The mean the number of spontaneously bowel movements (\$BMs) per day in the last treatment week was the primary outcome.

Results: From run-in, the mean weekly number of SBMs (s.d.) increased in both groups. In week 4, there was a statistically significant difference between the groups (PEG 3350+E, 4.4+02.581; placebo, 3.11t1.937) (95 per

cent confidence interval: 1.17, 1.95; Pe0.0001). Although the mean severity score for stomach discomfort/pa in was much lower after a run-in with PEG 3350+E, there was no difference between the two groups when compared to placebo. In week 4, the PEG 3350+E group outperfor med the placebo group in terms of spontaneous complete bowel motions, res ponderrates, stool cons isten cy, and straining severity. Abdomin al pain (4.5 percent; placebo, O percent) and diarrhoea (4.5 percent, placebo, 4.3 percent) were the most common drug-related treatment-emergent side events.

Conclusion: PEG 3350+E was found to be super ior to pla cebo in reliev ing constipation in IBS-C patients, and while there was a statistically significant reduction in abdom inal discomfort/pain compared to ba selin e, there was no such improvement compared to pla cebo. PEG 3350+E is a well-established and effective medication for IBS-C that should be examined.

SR. NO. 29

Patients with inflammatory bowel disease more often have small intestinal bacterial overgrowth on upper gut aspirate culture than on hydrogen breath test:

A preliminary report of an ongoing study

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Background: Small intestinal bacterial overgrowth (SIBO) is known in inflammatory bowel disease (IBD), but the data are limited. Hydrogen breath tests have been used as a simple tool for the diagnosis for SIBO, being non–invasive and inexpensive compared to the gold standard method, the quantitative culture of upper gut aspirate.

Methods: Patients with IBD (both Crohn's disease [CD] and ulcerative colitis [UC]) underwent evaluation for SIBO using glucose hydrogen breath test (GHBT) and quantitative upper gut aspirate culture with standard methods using Ghoshal microbiota sampler (GMS).

Results: Of 21 IBD patients, 15 had UC (mean age 33.75 ± 14.00 years; 8 [53.3%] male) and 6 had CD (mean age 52.00 ± 11.79 years; 4[66.7%]. The proportion of SIBO positivity on gut aspirate and GHBT is not statistically significantly different (5[83.3%] vs 2[33.3%], p=0.250).

Conclusions: Patients with IBD more often have SIBO on quantitative upper gut aspirate culture than by GHBT.



Spectrum of Functional Constipation in children at a tertiary care hospital

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Objective: To study the clinical profile and short-term response to treatment of functional constipation in children in a tertiary care Centre.

Methods: A retrospective observational study was conducted in New Delhi after informed written consent from parents. Records of all consecutive children between age group 6 months to 15 years with diagnosis of constipation as per Rome IV criteria from year 2017 to 2021 were enrolled to study the clinical profile and short-term response to laxatives*. Treatment with laxatives in form of PEGLEC with electrolytes for disimpaction and lactulose for maintenance therapy was given.

Results: Children with constipation constituted around 2.31% (144/6240) of pediatric gastro outpatient department attendance. Among the study

group, 8.3% (12/144) had organic etiology to constipation, rest were labelled as functional (FC). Male children constituted 60% and predominant age group affected was 3-5 years. Most common presentation among FC group was abdominal pain 75%or strenuous defecation 65%. Fecal impaction was seen in 40% FC cases at first presentation. Six month follow-up could be done in 120 patients, of which 70% were responders to given therapy.

Conclusion: Functional constipation was the commonest cause of constipation and response to lactulose was found to be efficacious as maintenance laxative.

SE NO 3

Clinical utility of EGG in patients presenting with functional dyspepsia or gastroparesis like symptoms with special reference to PPDS.

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Background: Recent evidence suggests that gastric emptying scans(GES) are unreliable in evaluation of Functional Dyspepsia(FD) or gastroparesis (GP). Moreover, there is an overlap of pathophysiological mechanisms in both the conditions which are characterised by gastric dysrhythmia, abnormal fundic accommodation, altered normal 3cpm gastric myoelectric activity(GMA), loss of interstitial cells of Cajal (ICC) and visceral hypersensitivity.

Aim: To understand the clinical utility of EGG is functional dyspepsia or gastroparesis like symptoms.

Materials and methods: Data of 302 patients consisting of 166 females and 136 males with FD or gastroparesis like symptoms (GLS) from 2019 to 2021 was retrospectively analysed. All of them underwent electrogastrography (EGG) with water load satiety test (WLST) and diagnostic endoscopy as part of the standard protocol.

Results: GMA recording by EGG revealed Gastric dysrhythmias (65%), Normal GMA (35%), abnormal accommodation(21%) with an avg. water intake volume of 231ml. GMAT analysis discovered APD(34%) and ICC dysfunction(44%) in FD/GLS patients. Segregation of data by PPDS and abnormal accommodation, revealed abnormal accommodation in 19%(16/83) with an avg. water volume consumption of 241ml and ICC dysfunction at 50%(8/16) in those with PPDS.

Conclusions: EGG may help to distinguish between antropyloroduodenal dysfunction or gastric outflow dysfunction; from those with ICC dysfunction or Gastric Neuromuscular dysfunction or gastric myo-electric contractile disorder and accommodation dysfunction. PPDS with accommodation dysfunction with or without ICC depletion is a distinct phenotype. EGG may play an important role on the spectrum from FD to gastroparesis in selection of the patients for most suited therapy especially with its ability to subtype thereby discovering clinical phenotypes.



Electrogastrography findings in patients with gastroparesis like symptoms post COVID -19

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Background: It has been hypothesized that a subset of patient with Covid-19 can develop post infectious dyspepsia or gastroparesis as part of the "long haul" sequalae of acute COVID infections. We undertook a study to find out if there are any alterations in the gastric myoelectric activity (GMA) in those patients.

Aim: To understand the effect of COVID 19 infection on gastric motility.

Material and methods: 20 patients with a sudden onset of gastroparesis like symptoms following Covid 19 infection were subjected to electrogastrography with water load satiety test (WLST) as part of standard hospital protocol for patients with suspected gastric motility disorders to understand the GMA

Results: GERD(65%) was the most common symptom followed by CNV (35%), anorexia (30%), PPDS (30%), dyspepsia (10%) and nausea(5%). EGG with WLST revealed gastric dysrhythmia (70%) abnormal gastric accommodation (5%) while GMA threshold (GMAT) analysis identified antropyloroduodenal dysfunction(APD) (40%) with Interstitial cells of cajal (ICC) or gastric neuromuscular dysfunction in 30% but in those presenting with GERD up to 62% had APD dysfunction.

Conclusions: EGG found ICC dysfunction in one-third of the population probably suggesting a profound effect of SARS-COV 2 on the ICC network with more than two-thirds had a disruption in the normal GMA. One-third of post-Covid GERD patients presented with APD dysfunction and EGG may provide crucial insights into the underlying pathophysiology that may guide therapeutic decision proving it to be an invaluable diagnostic tool. A follow-up of these cases may provide clues to whether the changes in the ICC's are reversible.

SR. NO. 33 Isolated slow transit constipation is rare in Indian population

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Introduction-Functional Constipation (FC) is evaluated using Colonic Transit Study (CTS), Anorectal Manometry (ARM) and Barium or Magnetic Resonance Defecography (MRD). Based on these tests, FC can be categorized on basis of colonic motility as well as according to presence or absence of coordinated activity in the anorectal apparatus. To the best of our knowledge, no previous Indian study has highlighted the prevalence of isolated slow transit constipation in our population. We present the data of our patients evaluated in a tertiary care GI motility lab in North India.

Methods-Consecutive patients referred to a GI physiology and motility laboratory from June 2017 to February 2018 in a tertiary care centre in northern India for evaluation of functional constipation and who underwent CTS and ARM were prospectively analysed.

Results- Anorectal Manometry: Median basal and squeeze pressures were 58 mm Hg (26-102) and 124 mm Hg (62-226) respectively while median values for first rectal sensation, urge to defecate and maximal tolerable volume were 30 cc (10-130), 90 cc (20-230) and 170 cc (50-300) respectively. Thirty patients (50%) showed Type I dyssynergia pattern while Type II, Type III and Type IV dyssynergia pattern was demonstrated by 3 patients (5%) each. Balloon expulsion test: All patients underwent balloon expulsion test. Thirty-six patients (60 %) were unable to expel the 50-cc water inflated balloon within one minute. A diagnosis of dyssynergic defecation based on concurrence of any 2 of the 3 recommended tests (ARM, BE, MRD) was seen in 94/180 patients (52%). Rectal hyposensitivity and rectal hypersensitivity were seen in 27/180 (15%) patients each. Significant anatomicabnormalities on MR defecography which could likely be an aetiology in constipation were seen in 15/54 (28%) patients.

Conclusion- Anorectal Manometry (ARM) and Balloon expulsion tests (BET) are useful techniques to evaluate physiology of anorectal apparatus. A combination of tests including ARM, BET and Defecography are recommended to increase the specificity of diagnosing dyssynergia.



Small Intestinal Bacterial Overgrowth (SIBO) in Elderly patients with functional bowel diseases (FBD)

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Background and Aim: Small intestinal bacterial overgrowth (SIBO) has been implicated in pathogenesis of functional bowel diseases (FBD) including irritable bowel syndrome (IBS). There is a scarcity of data regarding prevalence of SIBO in elderly patients with FBD. We aimed to study frequency and predictors of SIBO in elderly subjects with FBD.

Methods: We included 34 elderly patients (>60 y) with FBD (diagnosed by Rome IV criteria) and 40 healthy elderly controls (HC)(>60 y). Evaluation for SIBO was done by glucose breath test (GBT) using 100 gm of glucose after an overnight fast. Breath hydrogen & methane concentration were noted at baseline & every 15 min after administration of glucose for a total of 3 hours. Persistent rise in breath hydrogen or methane > 12 ppm above basal was considered diagnostic of SIBO.

Results: Of 34 patients, 5 had functional bloating (FB) while rest 29 had IBS (13 IBS-D, 10 IBS-C, 6 IBS-M). Median age of patients (65 [60-100] years) were comparable to controls (64.5[60-85] years) (P = 0.87). Patient group was similar to HC in gender distribution (male 20/34 [58.8%] vs 21/40 [52.5%], P = 0.64). SIBO was more frequent in patients with FBD than HC (11/34 [32.4%] vs 5/40 [12.5%], P = 0.039). Patients with D-IBS (P=0.04), abdominal bloating (P<0.001), small bowel diverticulae on BaMFT (P<0.001), and lower hemoglobin (P=0.022) more often had SIBO as compared to elderly patients with FBD devoid of these features.

Conclusions: SIBO was more frequent in elderly patients with FBD as compared to healthy controls. D-IBS subtype, bloating, small intestinal diverticulae, and lower hemoglobin were predictors of SIBO in patients with FBD.

SR. NO. 35

The impact of change in irritable bowel syndrome criteria from Rome III to Rome IV
on symptom coverity, quality of life. on symptom severity, quality of life and sleep disorder

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Background: The changes in the diagnostic criteria for irritable bowel syndrome (IBS) from Rome III to Rome IV may impact diagnostic performance and the disease spectrum. We hypothesized that Rome IV criteria may select a group of patients with more severe IBS with worse quality 4 life and psychological comorbidity. The data on these issues, however, are scanty.

Methods: Patients with suspected IBS seen in an outpatient clinic in a teaching hospital were evaluated by a translated-validated Hindi version of Rome questionnaire. Subsequently, the IBS was diagnosed among them using Rome III and Rome IV criteria. The symptom severity was assessed using IBS-symptom severity score (SSS), quality of life by world health organization quality of life-BREF (WHOQOL-BREF) and sleep quality by Pittsburgh sleep quality index score (PSQI). Results: Of 57 patients included, 51(89.5%) and 40 (70.2%) fulfilled the Rome III and the Rome IV criteria for IBS, respectively. Overall, 66.67% of Rome III IBS patient's fulfilled the Rome IV criteria for IBS, but 33.33% did not. Rome IV-positive patients were significantly has greater pain severity and pain frequency than Rome IVnegative patients. Rome IV-positive patients showed higher IBS-SSS score (median scores, 270 [182.5, 302.5] vs. 190 [150,215], p=0.006) than Rome IVnegative patients. However, PSQI was comparable between Rome IVpositive and negative patients. For the psychosocial alarm status, work impairment and abuse were higher in Rome IV-positive than the Rome IVnegative patients.

Conclusion: IBS patients positive for Rome IV have more severe symptoms, pain frequency and most Rome III-positive IBS patients fulfils the Rome IV IBS criteria.



Patients with functional gastrointestinal disorder have poorer quality of life and psychological co-morbidity than the healthy controls

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Background: Functional gastrointestinal disorders (FGIDs) are common in India but the data on its impact on quality of life and mental health are scanty from Indian continent. We aimed to prospectively study these issues among clinic patients in a university teaching Institution as compared to those in healthy controls.

Methods: Quality of life and mental health of patients with FGID and healthy subjects were assessed using world health organization quality of life-BREF (WHOQOL-BREF) and Rome psychosocial alarm questionnaire.

Results: Of 125 subjects, 100 FGID patients (median age 38 years, range [29.0-51.0]; 56 [56%] male) and 25 healthy subjects (median age 29 years, range [27-41], 15 [60%] male) had significant difference in the psychological domain scores (median scores and range, 50.0 [37.5-62.5] vs. 66.87 [64.6-70.6]; p<0.001). The physical, social and environment QOL scores of FGID patients and healthy subjects were comparable, whereas the overall quality of life and satisfaction with health were impaired in FGID patients.

Conclusion: FGID patients in India have impaired overall quality of life and psych.

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