Welcome

Welcome to the July 2017 edition of NewWave.

If you have any relevant articles or papers that you would like to be included in future editions, please email them to steve.perring@poole.nhs.uk

This edition celebrates the British Society of Gastroenterology Annual Scientific meeting, held this year in Manchester. AGIP had a prominent presence and many of our members have contributed reviews of talks presented in this edition of NewWave.

Contents:

Page 2: Forthcoming meetings
Page 4: Details of the second AGIP Upper GI Physiology Masterclass in Good Practice
Page 8: Meeting reviews BSG Annual Meeting:
Page 8: Update on the Consensus Working Group’s Outcomes for Anorectal Physiology
Page 10: How does physiology testing aid colorectal surgical decision making?
Page 11: Investigation and management of Globus
Page 12: Investigating Non Erosive Reflux Disease (NERD) and Non Cardiac Chest Pain (NCCP)
Page 14: Anorectal Physiology Investigations in the Complex Patient
Page 16: Functional GI Disorders—a UK Strategy
Page 18: Update on Chronic Diarrhoea Not Related to Inflammatory Bowel Disease
Page 19: Functional dyspepsia and NERD: How to manage when Proton Pump Inhibitors fail
Page 21: News from RCCP
### Forthcoming Events 2017/2018:

<table>
<thead>
<tr>
<th>Event Date</th>
<th>Event Name</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>24th-26th Aug 2017</td>
<td>Neurogastro 2017</td>
<td>European Society of Neurogastroenterology and Motility</td>
</tr>
<tr>
<td></td>
<td></td>
<td>University College, Cork, Ireland</td>
</tr>
<tr>
<td>13th-15th Sept 2017</td>
<td>Lower GI Short Course</td>
<td>Newcastle University</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Hosted by Salford Royal NHS Foundation Trust</td>
</tr>
<tr>
<td></td>
<td></td>
<td><a href="mailto:pgclinsci@newcastle.ac.uk">pgclinsci</a></td>
</tr>
<tr>
<td>21st Sept 2017</td>
<td>Synectics Medical Clinical Training Seminar</td>
<td>Wingate Institute, London</td>
</tr>
<tr>
<td></td>
<td>Impedance/pH reflux testing</td>
<td><a href="http://www.synmed.co.uk/training_clinical_training_seminar_2017_sept.htm">http://www.synmed.co.uk/training_clinical_training_seminar_2017_sept.htm</a></td>
</tr>
<tr>
<td>26th-28th Sept 2017</td>
<td>Upper GI Short Course</td>
<td>Newcastle University</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Hosted by Salford Royal NHS Foundation Trust</td>
</tr>
<tr>
<td></td>
<td></td>
<td><a href="mailto:pgclinsci@newcastle.ac.uk">pgclinsci</a></td>
</tr>
<tr>
<td>28th Oct-1st Nov 2017</td>
<td>25th UEG Week</td>
<td>Fira Gran Via, Barcelona, Spain</td>
</tr>
<tr>
<td></td>
<td></td>
<td><a href="https://www.ueg.eu/week/">https://www.ueg.eu/week/</a></td>
</tr>
<tr>
<td>24th-25th Jan 2018</td>
<td>BSPGHAN Annual Meeting</td>
<td>Queens Hotel, Leeds</td>
</tr>
<tr>
<td></td>
<td></td>
<td><a href="https://bspghan.org.uk/annual-meeting">https://bspghan.org.uk/annual-meeting</a></td>
</tr>
<tr>
<td>18th-20th April 2018</td>
<td>The First Pelvic Floor Summit</td>
<td>International Conference Centre, Telford</td>
</tr>
<tr>
<td></td>
<td>Advancing the Treatment of Incontinence</td>
<td><a href="http://www.ukcsconferences.com">www.ukcsconferences.com</a></td>
</tr>
<tr>
<td>2nd-5th June 2018</td>
<td>Digestive Diseases Week</td>
<td>Washington DC</td>
</tr>
<tr>
<td></td>
<td></td>
<td><a href="http://www.ddw.org/register/registration">http://www.ddw.org/register/registration</a></td>
</tr>
</tbody>
</table>
BREATHE TESTING

Hydrogen and Methane Breath Monitoring to help detect gastro-intestinal disorders

GASTROGENIUS
Desktop breath monitor for combined methane, hydrogen and oxygen measurement.
Highlights:
- Hydrogen and methane breath testing with instant results
- Breath Bag option makes it possible to test multiple patients at the same time
- Automatic O₂ correction for more accurate results
- Real time traffic light dial and smiley face system to motivate patients
- HYDROCHART software, fast warm up and simple monthly calibration

HYDROGENIUS
Compact hand-held hydrogen monitor with multiple patient testing up to 10 patients per session. It can be used to detect disorders like food malabsorption, sugar intolerances and small intestinal bacterial overgrowth in a non-invasive manner.
Highlights:
- Easy to use interface
- No start up time and instant results
- Large touch screen
- HYDROCHART software, built in protocols, simple 3 month calibration

For more information please contact info@ardmorehealthcare.com or call 01494 721820
AGIP [2018] Upper GI Physiology Masterclass

Thursday 1st March 2018

Post Graduate Education Centre, Queen Elizabeth Hospital, Birmingham, B15 2GW

10.00 – 10.30 Registration and coffee

10.30 – 10.40 Welcome (AGIP Chair) 
Warren Jackson

10.40 – 11.20 Hydrogen and Methane Breath Testing 
USA Consensus Document: Implications for the UK 
Anthony Hobson

11.20 – 12.00 BSG guidelines for oesophageal manometry and reflux monitoring 
Stephen Attwood

12.00 – 12.40 Current Treatment Options for Chicago Classification Disorders 
Phil Woodland

12.40 – 13.30 Lunch

13.30 – 15.00 Tailored Learning
Breakout Session

[Delegates pre book 3 x sessions and rotate around the individual work stations 30-minutes per station]

1. Basic HRIM Interpretation 
John Hayman

2. Advance HRIM Interpretation 
Andres Vales

3. Basic pH/Impedance Interpretation
Steve Perring

4. Advance pH/Impedance Interpretation
Caroline Race

5. Question & Answer Session with the expert 
Rami Sweis

6. Bring your own cases studies to analyse with the expert 
Anthony Hobson

15.00 – 15.40 'HRM and Chicago, Seeing the Wood from the Trees'
Rami Sweis

15.40 – 16.00 Coffee break

16.00 – 16.15 IQIPS Accreditation Process
TBC

16.15 – 16.30 RCCP Update
Paul Sharpe

16.30 – 16.40 Accredited Scientific Practice Programme (AGIP Education Secretary)
Sarah Kelly

16.40 – 16.50 AGIP Membership & Accreditation (AGIP Accreditation Officer)
Tanya Miller

16.50 – 17.00 Completion of Feedback Forms & Receive Attendance Certificates
AGIP Upper GI Physiology Masterclass in Good Practice  
Thursday 1st March 2018

Post Graduate Education Centre, Queen Elizabeth Hospital, Birmingham, B15 2GW

Name: ........................................................................................................ Title: ................................

Institution: ........................................................................................................................

Address (Include postcode): ..............................................................................................

Current position: .............................................................................................................

E-mail: ...............................................................................................................................

Telephone: .......................................................................................................................:

Special dietary requirements: ............................................................................................

Tailored learning [13.30pm – 15:00pm]... pre book 3 x sessions to rotate around [30-minutes per station]

Please circle 3 sessions below that you would like to attend on the day:

Basic HRiM Interpretation ....................................................... John Hayman

Advance HRiM Interpretation .................................................. Andres Vales

Basic pH/Impedance Interpretation ....................................... Steve Perring

Advance pH/Impedance Interpretation .................................. Caroline Race

Question & Answer Session with the expert ....................... Rami Sweis

Bring your own cases studies to analyse with the expert ... Anthony Hobson

Please turn over and complete the rest of the registration form...
AGIP Upper GI Physiology Masterclass in Good Practice
Thursday 1st March 2018
Post Graduate Education Centre, Queen Elizabeth Hospital, Birmingham, B15 2GW

Payment:
Registration fee is £50 for AGIP members, £90 for BSG Members and £100 for non-members, includes lunch and coffee breaks.

Please complete application form, attach a cheque (relevant amount) made payable to the ‘BSG’ and post to...

Warren Jackson, GI Physiology, Castle Hill Hospital, Castle Road, Cottingham, East Yorkshire, HU16 5JQ

Any questions please email: warren.jackson@hey.nhs.uk or telephone: 01482 622155 (direct line)

Your place will not be reserved until your cheque and registration form is received. Please note there will be no refunds for non-attenders.

I agree to the above and enclose my cheque made payable to the BSG

£50 for AGIP members £90 for BSG Members £100 for non-members (please circle as appropriate)

Date: ........................................ Signature: ........................................

Page 6
A number of AGIP members were given the opportunity to visit the BSG Annual Meeting in Manchester this year on grants from AGIP. Their reviews of presentations appear on the following pages.

Look out in future editions of NewWave to see how you can apply to get similar grants for future BSG Annual meetings.

Some of the AGIP members who have contributed to this edition of NewWave at a satellite meeting of the BSG meeting

From the left Margaret Withers, Phil Waudby, Sam Leach and Warren Jackson
This was a very interesting update on the International Anorectal Physiology Working Party Group’s [IAPWG] progress in hoping to standardise an international agreed ano-rectal physiology guideline and disease algorithm [similar to that of the Chicago Classification for HRM studies]. Prior to the introduction of IAPWG, a review of current evidence suggested that the method of ano-rectal physiology varies widely in clinical practice and everybody seems to be doing their own thing!

Data collected by Dr Carrington encompassed 107 centres across 30 countries. From those individuals who responded to a web-based questionnaire, it highlighted that no two centres had identical protocols for patient preparation, setup, study and data interpretation. There were also different ways of reporting the results and great variability between all centres.

As such, the specific objectives of the IAPWG were shared with the audience:
The need to standardise patient preparation, patient position, probe placement and interpretation of results will be covered in the new guidelines. Equipment and measurements were discussed [please note that these maybe subject to change before the final document is published].

### Equipment
- Solid state HRAM is preferable [however, water perfused HRAM is acceptable]
- Sensors should record circumferential not unidirectional pressure
- Probe diameter should not exceed 12mm
- A minimum recording length of 6cm is advised
- 3 dimensional capability is optional however not mandated

### Measurements
- Anal tone
- Voluntary sphincter contractibility
- Voluntary sphincter fatigability
- Sphincter reserve
- Propulsion
- Co-ordination
- Reflex activity

IAPWP has already met several times and the working group is meeting again in 3-4 months’ time to try and come to a consensus and produce an algorithm to aid all involved with ano-rectal physiology with a minimum standard protocol to use as a guideline within the next 12-18 months:

It will be interesting to see the fruition of the International Anorectal Physiology Working Party Group’s labour and how we can all standardise the service provided to our patients which will increase collaboration in terms of research etc. Watch this space!
How does physiology testing aid colorectal surgical decision making?
Karen Nugent [Colorectal surgeon, Southampton]
Reviewed by Philip Waudby [Hull & East Yorkshire Hospitals]

The talk started by highlighting some anorectal disorders and how 10-20% of the population will have one of these disorders at some point in their lives.

A paper authored by Rao was discussed. 78 healthy subjects had high resolution anorectal manometry and 16 patients had repeated studies and there was good correlation of results. It was noticed that when examining asymptomatic patients, there were significant differences seen in resting pressure and sustained squeeze in younger women vs older women. Intra-rectal pressure when straining was higher in older women vs younger women and no differences for any parameters in men. So to use these tests, there is considerable overlap between different groups of asymptomatic patients so individual patient plans cannot be dictated by physiology results alone. They can however be used for guidance along with patient symptoms. They may also be useful in comparing pre and post-operative results in a specific patient.

Uses of physiology were discussed. Chronic anal fissure is a painful condition often the result from a combination of high pressure anal sphincter, relative to ischemia and anal canal trauma. They are often managed medically using Diltiazem or Botox. If surgical management is required, a lateral anal sphincterotomy is considered. This gives a permanent reduction in sphincter pressure and can lead to faecal urgency and incontinence. Physiology is listed within the ACPGBI Fissure Guidelines after medical management but before surgical management. If a patient has a high pressure, sphincterotomy can be discussed giving the risks of incontinence but if the patient has a low pressure, other surgeries may be considered. At Southampton physiology plays a big part in the treatment of fissures.

Predicting functional outcomes in rectal resection surgery was then discussed. In a research study done in Southampton, patients are at greater risk of incontinence with a low anastomosis. Using manometry, the mean squeeze pressures were the same before and after surgery. However, resting pressures after an anterior resection were reduced. Rectal capacity was also reduced but the patients with the worst incontinence had the lowest maximum rectal tolerated volume. So to predict surgical outcomes, data can be used to discuss surgical options with patients and further research into why some function improves and some worsens is required.

Physiology can also be used in tailoring surgery. An example would be fistula in-ano. These are tracts that run from the inside of the anal canal to the outside skin. These can be painful and discharge pus from the external opening which may be continuous or intermittent. Digital examination, ultrasound and MRI can be used in assessing the tract. A surgeon would aim to excise the whole of the primary tract of the fistula. With this the anal internal and external anal sphincter can be involved and leave patients incontinent. Evidence from 10 studies showed preoperative ano-
rectal manometry can influence the functional outcome following surgery and by tailoring surgery and appropriate use of sphincter preserving techniques, continence outcomes are improved.

Litigation was then discussed. Clinical negligence has over doubled in the last 8 years. Maternity claims alone in the last 10 years, £31 million has been paid out to women (441) for perineal trauma. This included 3rd and 4th degree tears during childbirth that had been missed or not followed up correctly and there may be a place for ultrasound and physiology earlier in these patients. Miss Nugent stated that physiology can be used to manage patient expectations, give proof that surgery is required and that treatment has improved patients symptoms.

In summary, Miss Nugent stated that physiology can be used in guiding treatment (e.g. fissures), predicting outcomes (informing patient and surgeon) in cancer and functional surgery, tailoring surgery (e.g. fistula surgery), research and litigation.

Investigation and management of Globus
Dr Jason Dunn
Reviewed by Ms Vicky Ritchie, Principal GI Clinical Physiologist
NHS Grampian

Dr Dunn gave an insightful lecture regarding investigation and management of globus. Globus is a condition GI Physiologists have all come across during their career and know that it is one of the more difficult symptoms to investigate. There is little consensus regarding its aetiology and defined treatment pathways are not established. Globus is a common symptom that usually presents to ENT in the first instance. Its definition has recently been revised in the Rome IV criteria as “a non painful sensation of a lump or foreign body in the throat with no structural lesion identified on physical examination, laryngoscopy or endoscopy.” In addition, the sensation is present between meals and presents in the absence of dysphagia or odynophagia. Furthermore, eosinophilic oesophagitis and major oesophageal motor disorders should also have been excluded during investigation. Where an ENT cause is excluded an onward referral to GI is then made.

Investigation is directed at establishing whether the symptom is related to GI pathology or a functional disease. Dr Dunn then discussed the case for association between GORD and globus. Correlation between pH testing alone has a poor sensitivity (55%). However, the yield is improved by a further 28% with Impedance-pH testing. It was suggested that testing should be performed using Impedance with dual pH sensors for investigation of this condition. Other technologies such as Restech® and salivary pepsin kits were briefly discussed. However, evidence advocating their use for globus in the literature is sparse and lacking consensus and problems with the availability/supply of equipment was also highlighted. It was recommended that patients should also undergo oesophageal manometry as a proportion of patients presenting with globus have been found to have motor disorders such as achalasia and ineffective oesophageal motility.
A newer proposed cause of globus is gastric inlet patches which are histologically distinct from the normal oesophageal mucosa, comprising of columnar rather than squamous epithelial cells. It is hypothesised that the inlet patch is a result of failure of the squamous cells to replace the columnar ones in that area during embryonic development. It has also been reported that patches commonly occur in the presence of Barrett’s oesophagus (50%). The incidence of these gastric inlet patches in the general adult population is unknown but the endoscopic pick up rate is reported between 0.1%-10%. The inlet patch cell type may be either acid or mucous secreting. Response to a PPI may suggest acid secreting cells are present. However, if the patient was refractory to treatment it is possible that there are mucous cells involved. Dr Dunn indicated that it is thought that these inlet patches are under diagnosed due to the need to visualise them with narrow band imaging and that diagnostic yield was improved with improved endoscopist awareness. It is suggested that Buscopan is given during UGIE to relax the UOS and that withdrawal is slow to improve the detection rate. Pilot studies looking at therapy has been carried out using argon plasma coagulation and radio frequency ablation. Both studies have shown success in treating symptoms in the short term. It is proposed that if patients with globus do not have a gastric inlet patch that it is presumed that the condition is functional and that treatment is via neuromodulators, psychological therapies and speech and language therapy. Research into laryngeal motor and sensory nerve dysfunction is also ongoing presently by other groups. This and further research into gastric inlet patches will lead to a better understanding of this symptom and hopefully open the door to a defined diagnostic and treatment pathway for these patients.

Investigating Non Erosive Reflux Disease (NERD) and Non Cardiac Chest Pain (NCCP)
Daniel Sifrim
Reviewed by Ms Theresa Royles
Royal Devon and Exeter Hospital

Of those patients presenting to Gastroenterology with reflux symptoms a surprisingly large proportion (65%) have no objective evidence of reflux disease on endoscopy. Dr Sifrim gave an interesting review of the most up to date research into this subgroup of patients and the diagnostic techniques available in their assessment. He described an investigation pathway that he follows in these patients as well as more novel or specialist tests that are not widely available.

Investigations

Patients referred with reflux symptoms or chest pain in which a cardiac, pulmonary or musculo-skeletal cause has been excluded will undergo an oesophagogastroduodenoscopy (OGD). This rules out an organic cause for symptoms and identifies those patients with erosive oesophagitis. There are further specialist tests that can be performed at endoscopy including narrowband imaging to look for mucosal abnormalities or oesophageal biopsies to look for cellular changes both of which may be helpful in identifying patients with NERD.

A trial of PPI medication to assess the symptom response in patients without erosive oesophagitis may help to identify NERD patients but the specificity of this test is low.
High resolution oesophageal manometry (HRM) and importantly pH or pH with impedance studies are the next important step on the investigation pathway. HRM can identify hypercontractile disorders such as Jackhammer oesophagus as a cause of chest pain. Ambulatory HRM is not available in many centres but can be useful in identifying those patients with spasm as it is often difficult to reproduce symptoms in a short clinic appointment. It is also important to exclude Achalasia in this patient group as some patients with Achalasia can present with non-PPI responsive heartburn.

pH and pH with impedance testing with accurate symptom correlation are hugely important in phenotyping those patients with true NERD, functional heartburn and reflux hypersensitivity. A positive pH study, accompanied by reflux symptoms and without oesophagitis at endoscopy indicate NERD and this can be treated as GORD with PPI or possibly anti-reflux surgery. If the pH study is negative then it is symptom correlation (SI and SAP) that is the key factor in distinguishing between functional heartburn and hypersensitivity. If acid exposure is within normal limits but there is good symptom correlation this indicates reflux hypersensitivity. However, if symptom correlation is poor, this indicates functional heartburn.

If using combined pH and impedance monitoring extra analysis is available that can provide more information on reflux and oesophageal function. The baseline impedance, essentially measuring the conductivity of the oesophageal wall, indicates changes in the health of the mucosa. A decrease in baseline impedance indicates erosion. Another new metric, post-reflux swallow-induced peristaltic wave index, is a measure of the reflex swallow mechanism that generates clearance of reflux. This is present in health and has been shown to fail in reflux disease with an increased number of reflux episodes without a reflex swallow. This may prove to be a useful discriminator for functional heartburn. Non-cardiac chest pain has been associated with oesophageal distension and mixed gas and liquid reflux events identified on impedance have been found to be more frequently associated with chest pain than purely liquid reflux events.

There are some limitations to reflux monitoring particularly in relation to day to day variability. In one study 1/3 of patients undergoing extended reflux monitoring had abnormal acid exposure on day 2 or 3 following a normal first day. Extended reflux monitoring can help to account for this and also give more opportunity to capture symptoms during a test.

**Treatment**

If true NERD is identified then treatment is as for GORD including PPI or consideration of anti-reflux surgery. High resolution manometry provocation tests such as multiple rapid swallow and bread swallow can be used to help predict likelihood of dysphagia following anti-reflux surgery.

For those patients identified as having functional chest pain, Dr Sifrim treats these with cognitive behavioural therapy (CBT) or antidepressants. He stressed the importance of identifying and protecting these patients. Their symptoms are not due to reflux, they will not be helped by PPI and should never undergo anti-reflux surgery.

Patients with hypersensitivity may respond to PPI therapy or otherwise he suggested similar treatment to functional heartburn including antidepressants.
This excellent presentation started by mentioning the rationale behind why we do the test:

- Confirm clinical impression and provide the basics to treatment [complementary to other investigations]
- Acquire objective test results
- Aim to accurately phenotype patients on the basis of the underlying pathophysiologies
- Provide recognised disease-related biomarkers capable of providing clinical benefit

Mark defined which other tests are available - ‘Routine Clinical Tests’ and ‘Advanced Tests’:

**Routine Clinical Tests:**
- Tests of anorectal function...
  - Anorectal manometry [high-resolution]
  - Rectal sensory assessment
  - EMG / PNTML

- Tests of anorectal structure...
  - Endo-anal ultrasound [2/3D]

- Tests of anorectal evacuation...
  - Balloon expulsion [+/- manometry]
  - Barium proctography
  - MR proctography

- GI / colonic transit studies...
  - Radio-opaque marker studies

**Advanced Tests:**
- Tests of anorectal function...
  - Anorectal biomechanical assessment
  - Barostat / rapid barostat
  - EndoFlap
  - Brain-gut axis: bidirectional
  - Cortical evoked potentials
  - Motor evoked potentials

- Tests of anorectal structure...
  - Trans-perineal / pelvic floor ultrasound
  - Pelvic Floor MRI

- Tests of colonic function...
  - Colonic Manometry
  - MRI

- GI / colonic transit studies...
  - Telemetric capsules
The advanced tests not only enhance our understanding of the pathophysiology but can provide valuable information in relation to the ‘upstream’ markers [i.e. outside the anorectum].

Mark mentioned the ‘Functional Lumen Imaging Probe’ [FLIP], which is a novel method for the detailed evaluation of the biomechanical properties of tubular organs and how it determines serial cross-sectional areas and pressure during distention.

Rectal compliance and hyposensitivity was discussed, highlighting that half of patients with constipation and rectal hyposensitivity have increased rectal compliance (‘lax rectum’).

The anorectal efferent function was discussed and Mark highlighted two papers - Paris et al. Colo-rectal Dis 2012 showed that 23% of 69 FI patients had abnormal anal response to transcranial stimulation and the 88% of 50 FI patients had abnormal anal or rectal response to translumbar or transsacral stimulation, Rao et al. Dis Colon Rectum 2014.

The 24-hour prolonged manometric study was discussed and the rectosigmoid motility patterns demonstrated by Chan et al. Gut 2015 in rectal hypersensitivity. It was interesting to hear how the attenuation of normal sigmoid motility (loss of ‘brake function’) can be a factor in patients with faecal incontinence.

‘Routine testing’ of anorectal structure and function provides diagnostic information in the majority of patients, sufficient to inform management but most patient are ‘complex’ [I’m sure we can all relate to this!] and that ‘advanced testing’ may be indicated in a minority of patients usually confined to specialist centres and could include:

- Total pelvic floor ultrasound
- Endoflip
- Evoked potential [afferent / efferent]
- High-resolution colonic manometry
- MRI methods
- Wireless motility capsules
- Hydrogen and methane-based breath tests

The results of ‘advanced testing’ may enhance understanding of pathophysiology which could facilitate targeted therapy but treatments may not exist! This may allow the basis for a stratified [personalised] medicine approach and development of treatments directed to subgroups with distinct mechanisms of disease.

**Budding Reviewers**

If you attend a meeting and wish to review a presentation at that meeting in a future edition of NewWave, please contact the NewWave editor (steve.perring@poole.nhs.uk)

Help-out the rest of us who did not manage to get to the meeting
Irritable bowel syndrome (IBS) is a chronic, relapsing and often life-long gastrointestinal disorder. IBS is typically characterised by abdominal pain, bloating and a change in bowel habit. IBS influences the day-to-day functioning of sufferers and has a greater impact on quality of life compared to asthma and diabetes.

**Prevalence of IBS**

<table>
<thead>
<tr>
<th>Condition</th>
<th>Prevalence</th>
<th>Incident cases/year nationally</th>
<th>Incident cases/year per CCG</th>
<th>Incident cases per GP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crohn’s disease</td>
<td>0.16%</td>
<td>3000-6000</td>
<td>14-28</td>
<td>Every 4-7 years</td>
</tr>
<tr>
<td>Coeliac disease</td>
<td>1%</td>
<td>7000</td>
<td>33</td>
<td>Every 3 years</td>
</tr>
<tr>
<td>Colorectal cancer</td>
<td>5%</td>
<td>40000</td>
<td>157</td>
<td>Two per year</td>
</tr>
<tr>
<td>IBS</td>
<td>10%-20%</td>
<td>78500</td>
<td>370</td>
<td>Four per year</td>
</tr>
</tbody>
</table>

*Data from England (all other data from UK).

IBS patients often have other conditions such as Fibromyalgia, chronic fatigue syndrome, chronic pelvic pain, temporomandibular joint disorder and psychological conditions.

**Diagnostic criteria for IBS**

<table>
<thead>
<tr>
<th>ROME IV</th>
<th>NICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recurrent abdominal pain at least 1 day/week in the past 3 months, associated with two or more of:</td>
<td>Abdominal pain/discomfort relieved by defecation or association with altered stool frequency/form, plus two or more of:</td>
</tr>
<tr>
<td>Related to defaecation</td>
<td>• Altered stool passage</td>
</tr>
<tr>
<td>Associated with change in stool frequency</td>
<td>• Abdominal bloating/distention</td>
</tr>
<tr>
<td>Associated with change in stool form (consistency)</td>
<td>• Symptoms made worse by eating</td>
</tr>
<tr>
<td></td>
<td>• Passage of mucus</td>
</tr>
</tbody>
</table>
Impact of IBS

Management of IBS represents a large burden to both primary and secondary care centres. 30% of GI problems reported in GP consultations are IBS.

Majority of patients with IBS have seen a primary or secondary care physician. 19% had been provided with a diagnosis on the first visit but 56% required 1-5 further visits to their clinician before a diagnosis could be made.

In a year, patients with IBS spend an average:

- 8.4 days seeing a doctor or nurse vs 5.2 days for non-sufferers
- 5.5 days off work sick vs 3.1 days for non-sufferers
- 3.9 days in bed vs 2.7 days for non-sufferers
- 10.2 days where work activities had to be cut short vs 4.8 days for non-sufferers

Current guidance

- BSG guidelines on IBS 2007
- NICE
  (https://www.nice.org.uk/guidance/cg61/chapter/1-recommendations#diagnosis-of-ibs)

Future

- Audit for baseline
- Aim to engage clinicians in web based simple survey monkey
- Use as driver to set standards
- Influence education and training

How can we help?

- Engage in survey
- Suggestions of “outcome” measures (both service related and patient reported)
- Help shape the future and raise standards

Summary

- Need baseline audit
- Aim to use this to drive forward standards-QI project
- Encourage training in NGM
The talk began by referencing the new Rome IV criteria and its use in diagnosing Diarrhoea predominant Irritable Bowel Syndrome (IBS-D). Ford et al (1) produced a paper attempting to validate the Rome III criteria by calculating positive likelihood ratios and found the criteria performed only modestly in diagnosing IBS. This team is due to publish a new review of IBS including the Rome IV which may be of interest to readers. In Prof. Spiller’s opinion, bowel habit and urgency are the most worrying symptoms in IBS, with pain and bloating less so. He also referenced Palsson et al (2) who showed the episodic nature of diarrhoea may not be related to abdominal pain. These points did not appear to have been addressed by the Rome IV definition.

The speaker discussed the causes of IBS-D as being food and motility related, where stress can affect the latter. Cann et al (3) showed that small bowel motility is affected in IBS as well as that of the colon. MRI studies have shown that IBS-D patients tend to smaller bowel volumes and sizes. Small bowel transit was quicker and correlated to higher Hospital Anxiety and Depression scores. Colon transit, especially the sigmoid, was quicker with 40% less volume in IBS-D. Clemens et al (4) showed that 5-hydroxytryptamine-3 (5-HT 3) receptor antagonists can be used to increase the high amplitude propagated contractions in the sigmoid, which paradoxically decreases stool frequency and improves stool consistency. There was also discussion on the role of bile acid diarrhoea caused by defective inhibition of fibroblast growth factor 19. Severely reduced retention during the Se-homocholic acid taurine test was seen in 10% with a good response to treatment.

The management of the IBS-D patients was based on the causes discussed. The use of timely follow-up was key in his opinion and helped to avoid missed diagnoses. Medications included Loperamide which was useful to slow transit down but can have an off/on effect and does not change pain symptoms, and Colestyramine for those with bile acid malabsorption. The 5-HT 3 antagonist Ondansetron, in his opinion, improves IBS-D but the Triton trial is awaited to prove this. (Prof. Spiller is the lead researcher of this trial).

A question was asked about the role of somatisation in the diagnosis of IBS. Prof. Spiller agreed this was important and was useful to combine with the Rome IV criteria. Patient questionnaires can be used to assess this and where syndromes such as Fibromyalgia or Chronic Fatigue overlap, this may strengthen the diagnosis of IBS. A question was also asked as to the role of Small Intestinal Bacterial Overgrowth (SIBO). The speaker referenced a paper by Simren et al (5) which suggested the lactulose breath test was more likely to show fast transit rather than SIBO. However the paper did support the use of the glucose breath test in a strong clinical presentation of SIBO. At The Functional Gut Clinic we use a rise of >10ppm at 60mins as positive for SIBO with a lactulose breath test, however the Simren review quoted a study which used a rise of 20ppm by 180mins as abnormal. We feel that with this tighter criteria for the rise at 60mins, associated with a reproduction of the patient’s symptoms, provides a clinically relevant assessment of SIBO over and above what is provided by glucose.


---

**Neuro-gastroenterology and Motility**

From Top to bottom – The Top

By Prof Jan Tack

Reviewed by Emma Jones

Southampton Hospital

---

**Functional dyspepsia and NERD: How to manage when Proton Pump Inhibitors fail**

The Rome consensus has proposed a distinction between meal-induced symptoms and meal-unrelated symptoms. FD now consists of two main diagnostic categories:

1. meal-induced dyspeptic symptoms postprandial distress syndrome (PDS), characterized by postprandial fullness and early satiation, and
2. epigastric pain syndrome (EPS), characterized by epigastric pain and burning

Rome IV definition of dyspepsia is that dyspepsia which originates from the gastroduodenum. It requires both of the criteria below:

**One or more of the following:**
- Bothersome postprandial fullness
- Bothersome early satiation
- Bothersome epigastric pain
- Bothersome epigastric burning

**AND**
No evidence of structural disease (including upper endoscopy) that is likely to explain their symptoms.
As a general rule of thumb if a patient has burning they have EPS and if they have symptoms of fullness and bloating after meals they have PDS and if they overlap they have both (50%).

**Functional Dyspepsia Treatments: Options and evidence: EPS VS PDS**

Before drug administration, testing for H. pylori and eradication treatment, if positive, should be proposed, but the yield in terms of symptom relief likely to be low (10% of those treated)

PPI use has been shown to be effective in EPS but not in PDS

pH monitoring 50% of studies will be abnormal in EPS.

There is also GERD evident in PDS group which is related to intra-gastric pressure which is reduced due to presence of TLSOR’s.

There was no significant difference in efficacy among various PPI doses. FD patients with epigastric pain (EPS group) rather than patients with meal-induced symptoms (PDS) seem to respond better to PPIs

Prokinetics stimulate gastric smooth muscle contractions and are widely used in patients with FD. They are most convincing in the PDS group. A significant benefit has been found for Domperidone, Tegaserod and Cisapride, which accelerate gastric emptying. However these drugs have been withdrawn due to safety concerns.

Data suggests that tricyclic antidepressants show a significant benefit over placebo but the available trials are small and of poor quality. The mechanism of action of antidepressants is unclear, although there is some evidence that the drugs affect gastric sensitivity Tricyclics work particularly well for the pain predominant patients in the EPS group but have no benefit in PDS patient

Activation of 5-HT1A receptors can achieve inhibition of excitatory motor neurons and as a result it may enhance gastric accommodation.

**Learning outcomes:**

- In patients with EPS a 4-8 week trial of PPI therapy is the treatment of choice,
- In patients with PDS a prokinetic drug should probably be proposed as initial therapy.
- In cases of insufficient therapeutic response combined therapy or a change of drug class is advisable, or combination therapy can be considered.
- In patients who remain refractory to initial therapy, a trial of a low-dose tricyclic antidepressant may be considered.
- Serotonin/noradrenaline reuptake inhibitors should probably be avoided.
**RCCP appoints 3 new lay members to its Council**

RCCP is delighted to announce that it has made 3 new appointments of lay members to its Council. Between them they bring significant and independent experience of business, regulation, education and patient engagement.

Joy Tweed – is a lecturer in Healthcare management at Westminster Business School and until recently was a board member of the Health and Care Professions Council (HCPC)

Gillian Adams – has held a number of positions at board level in patient groups at both national and local level.

Adam Sampson – has held a number of senior positions in regulatory organisations, including the Prisons Ombudsman and the Legal Ombudsman

It is expected that these new appointments will underlie and enforce the RCCP position of ‘Championing patient safety’ through setting and measuring education standards and investigating and conducting disciplinary matters.

**RCCP applies to PSA for accreditation of its register**

For many years RCCP has held back from applying to the Professional Standards Authority (PSA) for accreditation of its register under the PSA’s accreditation of voluntary registers scheme. Originally RCCP hoped that Clinical Physiologists would become statutorily regulated, which would make the PSA accreditation irrelevant. More recently, the discussions that RCCP have been having with Academy for Healthcare Science to achieve a single register in Clinical Physiology meant that it continued to hold back on PSA accreditation. During these discussions it became apparent that merging a register that held PSA accreditation with a register which didn’t would have its difficulties. To remove these difficulties RCCP has applied for PSA accreditation.

The application is subject to consultation which ends in early August and thereafter PSA will notify RCCP of any issues that have arisen during the consultation or its own consideration of our application. PSA will also undertake a site visit and sit in on an RCCP Council meeting (probably in September) before putting the application forward to the PSA board for approval.

**Advancing Healthcare Awards NI 2017**

This year the awards programme welcomes entries from a wider spectrum of healthcare practitioners including Clinical Physiologists – an important development that will greatly enhance the awards and the influence they have across Northern Ireland and beyond. The theme for the awards and the conference is Delivering together, based on the Department of Health report Health and Wellbeing 2026 – Delivering together. The judges expect all entries to demonstrate how their work has improved quality and safety. There is no award specifically for e-health projects but these are welcome under any category; and team entries that include support workers and assistant practitioners are welcomed. Details about the different categories of award and how to make a nomination can be found here [http://advancinghealthcareni.co.uk/enter-now-2/](http://advancinghealthcareni.co.uk/enter-now-2/). Please note that the closing date for nominations is Monday 4th September 2017. The awards programme culminates in the celebration dinner at the Stormont Hotel in Belfast on 18 October 2017. Guests will include all shortlisted teams and their guests, leaders of the professional bodies and membership organisations, senior people in healthcare as well as sponsors and their guests.