Welcome to our review of the 23rd United European Gastroenterology Week.

UEGW 2015 in Barcelona was attended by about 14,000 gastroenterologists from around the world. Excellent clinical updates in all interest areas were presented. To identify abstracts for inclusion was challenging with 1858 posters and 451 oral presentations. The focus here is on clinically relevant science that may now or soon change practice. As relatively little liver disease research was presented this area has not been considered in our top 10 list.

I hope you find this conference review interesting and the content useful in your clinical practice.

Kind Regards,
Laureate Professor Nicholas Talley

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Colonoscopic perforations in the English NHS Bowel Cancer Screening Programme (NHSBSCP) – beware diagnostic perforations and the sigmoid colon

Authors: Derbyshire E et al.

Summary: This retrospective analysis of data collected in the English National Health Service Bowel Cancer Screening Programme (n = 263,129 endoscopic procedures) aimed to quantify the overall rate of perforation, define management and outcomes, and identify the factors associated with poorer outcomes. The rate of perforations was 0.06% (n = 147), 69.2% of which were diagnostic; 12.8% of cases were visualised and treated with endoclips in 10.2% of cases. The majority (n = 12) of the diagnostic perforations occurred in the sigmoid colon. Diagnostic perforations were associated with the need for surgery (RR 1.86; 95% CI 1.39-2.49; p = 0.001). Stoma formation occurred in 26.1% of those having surgery (n = 115) and was associated with male sex (RR 2.07; 95% CI 1.05-4.07; p = 0.015) and sigmoid location (RR 2.56; 95% CI 1.50-4.38; p = 0.000). The mortality rate was 0.87%. Post perforation morbidity (inpatient complication or new diagnosis following admission) occurred in 19.7% of patients and was associated with diagnostic perforations (RR 1.86; 95% CI 1.39-2.49; p = 0.001). Stoma formation occurred in 26.1% of those having surgery (n = 115) and was associated with male sex (RR 2.07; 95% CI 1.05-4.07; p = 0.015) and sigmoid location (RR 2.56; 95% CI 1.50-4.38; p = 0.000).

Comment: Screening colonoscopy has become arguably the most important procedure performed by gastroenterologists because of the value in detecting and, following adequate polypectomy, preventing colorectal cancer. Like the UK, Australia has a faecal occult blood test cancer-screening programme although in the UK this is limited to 60-74 years of age. An important consideration when discussing screening colonoscopy with patients is the risks versus benefits, and documenting the discussion. Using a state of the art system for capturing all adverse events, this study identifies an incidence of perforation of 0.06%; two thirds were from therapeutic interventions, an increased risk that patients should be advised of pre-colonoscopy. The most worrying complication is diagnostic perforation, often missed during the procedure and occurring usually in the sigmoid. Perforation had a low but not zero mortality rate (nearly 1%) with a one in five morbidity rate. Colonoscopy is relatively safe, but despite advances in training and technology this study reminds us all there remain real risks that must be minimised and discussed with patients. Perforation rates by a colonoscopist of over 1 in 1000 screening cases should prompt a review of technique.

Oral presentation: OP001

Abstract

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Metformin efficacy and safety for colorectal polyps: A double-blind randomized controlled trial

Authors: Higurashi T et al.

Summary: This prospective, multicentre, double blind, randomised, placebo-controlled trial studied the chemopreventive activity of metformin 250 mg/day on metachronous colorectal polyps in 150 non-diabetic post-polypectomy patients. One year after treatment, polyp number (hyperplastic polyp and adenoma) was lower in metformin (n = 70) versus placebo (n = 64) recipients (27/70 [38.6%] vs 36/64 [56.3%]; p = 0.041). Metformin 250 mg/day did not produce any severe side effects, including lactic acidosis or hyponatraemia.

Comment: Preventing future colonic polyps, and therefore hopefully colon cancer, is a holy grail of gastroenterology. Meta-analyses indicate aspirin and non-steroidal anti-inflammatory drugs reduce adenoma and colon cancer rates by 20% to 40% respectively through inhibiting cyclooxygenase involved in cancer development. High dose aspirin is used as part of the management of hereditary nonpolyposis colorectal cancer. A novel approach is through the use of metformin, the anti-diabetic drug that inhibits the mammalian target of rapamycin (mTOR) pathway. Furthermore, diabetes is itself a risk factor for colon cancer, although the risk is under 40% higher compared with those free of diabetes. In this novel, randomised trial of non-diabetics, metformin at low dose versus placebo appeared to lead at one year to lower the rate of detected polyps in a consecutive cohort of all-comers post-polypectomy. Treatment was well tolerated, but the numbers were modest and a multicentre trial is required including non-Japanese patients to confirm these intriguing results.

Oral presentation: OP373

Abstract

Diagnosis of dyssynergic defecation by questionnaire and physical examination

Authors: Chiarioni G et al.

Summary: This Italian study examined the sensitivity and specificity of symptom questions and physical examination to distinguish dyssynergic defecation from other subtypes of constipation in 238 patients (average age 45.2 years, 92% were female) with refractory constipation. Dyssynergic defecation was diagnosed in 102 patients, 31 were diagnosed as slow transit constipation, 37 as mechanical obstruction, and 63 as normal transit constipation (5 patients unclassified). In a Learning Sample (n = 119) the best predictor of dyssynergic defecation was a symptomatic question based on which muscles were used to defecate (a response of “anus” identified 91.1% of dyssynergic defecation diagnoses), any other answer identified 88.7% of other constipation types. In a Validation Sample (n = 119) the results were similar and concordance between answers 30 days apart was 98.7%. Physical examination indicated that anal sphincter relaxing on straining correctly identified 97.8% of non-dyssynergic defecation patients.

Comment: Chronic constipation is common in clinical practice and a number of therapeutic options are available. However, at least one-third of patients with chronic constipation have unrecognised pelvic floor dysssynergia, often from paradoxical pelvic floor muscle contraction (and sometimes from mechanical outlet obstruction from a rectocele etc), so they cannot expel stool normally. Laxatives usually fail to help with these cases, frustrating patients and physicians. Diagnosis traditionally rests on anorectal manometry and balloon expulsion testing, often performed in a dedicated centre as most gastroenterologists have received little training to identify these disorders (indeed some do not perform a rectal exam as part of their clinic evaluation any longer, although this is arguably of major diagnostic value). Previous studies have suggested history taking cannot accurately identify pelvic floor dysssynergia even if patients complain of a feeling of anal blockage or excessive straining at stooling. This study from an Italian-US oesophagostomist is important because, if confirmed, the data suggest a simple screening question is highly sensitive for identifying dyssynergic defecation, while a standard rectal examination is highly specific for the disorder. Hence if the patient reports they have to squeeze the anus to assist them to defecate, this question is an excellent way to identify a likely case of pelvic floor dysssynergia, while other questions are not very useful. If on the other hand during the rectal examination the anal sphincter relaxes on straining (a very simple test to do in the clinic, but of no value in a sedated patient on the colonoscopy table), this virtually rules out pelvic floor dysssynergia. Adding these tools to the clinical evaluation may improve management.

Oral presentation: OP056

Abstract

Faecal diversion for management of perianal Crohn's disease: A systematic review and meta-analysis

Authors: Singh S et al.

Summary: This systematic review and meta-analysis (Preferred Reporting Items for Systematic Reviews and Meta-Analyses [PRISMA] guidelines) examined the use of temporary faecal diversion for refractory, perianal CD in 14 cohort studies (n = 472). In total, 68.5% of patients (95% CI 60.1-75.9) achieved an early clinical response after faecal diversion. Bowel continuity restoration was attempted in 34.4% (95% CI 26.4-43.3) of patients (1-1.5 years after faecal diversion), but was successful in only 15.0% (95% CI 10.1-21.9). In 31.5% (95% CI 16.8-51.1) of those attempting restoration, re-diversion was necessary. These dismal results suggest faecal diversion should be applied very cautiously in resistant perianal disease.

Comment: Management of perianal CD, most notably fistulas, remains very challenging. Options depend on the symptoms, impairment of quality of life and anatomy, and include metronidazole or ciprofloxacin, and an anti-TNF drug; azathioprine or 6-mercaptopurine, and total parenteral nutrition in severe cases. Treatment of refractory fistulas is less efficacious. Surgery is reserved for those with refractory fistulas. The role of temporary faecal diversion when other options fail, is controverisal, primarily because of concerns about successfully restoring colon continuity. Promisingly, 68.5% (95% CI 60.1-75.9) of patients (1-1.5 years after faecal diversion), but was successful in only 15.0% (95% CI 10.1-21.9). In 31.5% (95% CI 16.8-51.1) of those attempting restoration, re-diversion was necessary because of severe relapse; proctectomy after failure was necessary in 44.7% (95% CI 36.4-53.4) of patients. In three studies reviewed, multivariate and univariate analysis indicated that bowel continuity restoration was more successful in patients without rectal involvement (85.8-87.5% without rectal involvement vs 11.1-53.3% with rectal involvement).

Oral presentation: OP051

Abstract

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Efficacy of rifaximin and dietary fiber on symptoms of uncomplicated diverticular disease of the colon

**Authors:** Copaci I et al.

**Summary:** This study comparatively evaluated long-term efficacy of rifaximin 400 mg twice daily (n = 172) and dietary fibers (n = 110) in patients with uncomplicated diverticular disease. Analysis indicated both treatments were effective in reducing tenesmus (p < 0.0001), bloating (p = 0.01), diarrhea (p = 0.01), and bleeding (p = 0.03). Global Symptomatic Score declined in both groups, but the reduction was greater in rifaximin recipients (3.31 vs 5.86, p < 0.001). Rifaximin recipients experienced a more marked decline in symptom frequency. Three cases of rectal bleeding and two of diverticulitis occurred in rifaximin recipients and three cases of intestinal infections, two of rectal bleeding and four of diverticulitis occurred in the fiber group (p = 0.031). Side effect rates did not differ between groups (7 patients vs 5 patients).

**Comment:** Preventing attacks of acute diverticulitis in those with recurrent episodes remains an important clinical goal. Traditional teaching remains after two acute episodes, surgery should be considered. Unfortunately, recent trials testing ASA compounds for prophylaxis have been negative. The role of the non-absorbable antibiotic rifaximin in preventing acute diverticulitis is unknown, but the drug currently is FDA approved to treat travelers’ diarrhea and IBS with diarrhea (and is the only drug documented in the short term to positively alter the natural history of IBS). Diverticulitis is associated with IBS-like symptoms in a subset (termed symptomatic uncomplicated diverticular disease – SADD) although the relationship is controversial. In this randomised controlled trial of SADD, cyclical treatment monthly with rifaximin resulted in a significantly lower rate of diverticular disease complications in the rifaximin group both in terms of new and persistent disease. The cost of rifaximin were to become more affordable for patients this may be a consideration in difficult cases with diverticular disease although the long-term safety of chronic use of rifaximin remains to be well documented.

Oral presentation: OP427
Abstract

Persistent low-grade dysplasia in Barrett’s oesophagus identifies patients at higher risk for esophageal adenocarcinoma: A Dutch nationwide cohort study

**Authors:** Kestens C et al.

**Summary:** This Dutch study tested whether persistence of low-grade dysplasia in Barrett’s oesophagus can be risk stratified to identify patients benefiting from ablative treatment in prevention of oesophageal adenocarcinoma. In total, 1582 low-grade dysplasia patients were identified, 161(10%) had confirmed and 1351(85%) unconfirmed low-grade dysplasia at index endoscopy. Overall incidence rate for high-grade dysplasia or oesophageal adenocarcinoma in patients who had low-grade dysplasia at index endoscopy was 2.10 per 100 person years (95% CI 1.78-2.46), while the oesophageal adenocarcinoma incidence rate was 1.19 per 100 person years (95% CI 0.96-1.48). In patients with confirmed low-grade dysplasia, the incidence rates were 5.16 per 100 person years (95% CI 3.42-8.10) and 2.51 per 100 person years (95% CI 1.46-3.92) in those with a confirmed low-grade dysplasia, 51% (n = 82) regressed to non-dysplastic and 30% (n = 49) had persistent low-grade dysplasia. In confirmed and persistent low-grade dysplasia (median follow-up 3.72 years), the incidence rates were 7.65 per 100 person years (95% CI 4.45-12.34) and 2.04 per 100 person years (95% CI 0.65-4.92). The incidence rates for non-dysplastic patients at follow-up after initial confirmed low-grade dysplasia were significantly lower, 2.32 per 100 person years (95% CI 1.08-4.40) and 1.45 per 100 person years (95% CI 0.53-3.21), Individuals with two consecutive non-dysplastic Barrett’s oesophagus endoscopies (29%; n = 46) following a confirmed low-grade dysplasia diagnosis developed no high-grade dysplasia or oesophageal adenocarcinoma during follow-up.

**Comment:** Barrett’s oesophagus is a pre-malignant condition (with a risk of up to 0.4% per year), but a subgroup of concern is those with dysplasia. The risk of cancer progression in those with low-grade dysplasia is still unclear, with sampling error and errors in interpreting the pathology contributing to the uncertainty. Management options for low-grade dysplasia include surveillance every 6 to 12 months, currently standard practice, or eradication of the Barrett’s mucosa endoscopically, which is now more widely available in expert centres. Confirmation of the diagnosis of low-grade dysplasia by an expert pathologist may be valuable because cases will often be reclassified, but the optimal methods to risk stratify low-grade dysplasia in order to provide best-case management are unclear. This important large-scale conducted observational study indicates most cases thought to have low-grade dysplasia will not be confirmed on a second look expert pathology review, and this should become standard practice where possible. About one third of cases with confirmed low-grade dysplasia will have persistent disease at one year and these are the cases at highest risk of high-grade dysplasia or cancer; endoscopic therapy rather than continued surveillance in this selected subgroup should be strongly considered. The risk of confirmed non-dysplastic or indefinite for dysplasia Barrett’s oesophagus is much lower, but management of indefinite cases remains to be better characterised.

Oral presentation: OP318
Abstract

Detection of gluten peptides in urine of celiac patients: Correlate with mucosal damage

**Authors:** Moreno Amador MD et al.

**Summary:** This group developed a novel method for measurement of gluten intake and assessment of adherence to a gluten-free diet in coeliac patients using urine-based detection (quantitative lateral flow test with anti-gliadin monoclonal antibody (GIP) of gluten immunogenic peptide. The presence of GIP was detected in samples from 76 healthy subjects within 4-6 hours after gluten intake following a gluten-free diet and for 1-2 days afterwards. The assay had high sensitively detecting consumption of as little as 50 mg of gluten. The assay detected GIP in 96% of the 58 coeliac patients on a gluten-free diet. Urinary GIP detection was also correlated with mucosal atrophy in the coeliac patients. In a subset of coeliac patients who had duodenal biopsies (n = 27), retrospective analysis indicated 90% of patients without villus atrophy also had no detectable urine GIP.

**Comment:** Clinically monitoring compliance with gluten withdrawal is challenging because gluten is present in many processed foods. Diet history is often unreliable and patients may be unaware of gluten ingestion in certain food products despite labelling requirements. Serology such as tissue transglutaminase (TG) will be positive too late to help guide dietary alteration and indicates the development of mucosal damage not gluten ingestion. Amador and colleagues from Spain apply a technique developed in the food industry, detecting GIP. The urine test could detect interruption of a gluten-free diet with excellent test characteristics. Urine is easy to handle and test with this method, and requires no blood draw or stool testing, which can limit testing compliance. The study suggested many patients who believe they are gluten withdrawal compliant are often not, and adult males were most likely to fall into this category. The method, when commercially available, appears very promising for the monitoring of coeliac disease management with home test kits and should aid the work-up of apparently resistant coeliac disease to gluten withdrawal.

Oral presentation: OP103
Abstract

Eluxadoline demonstrates sustained efficacy for the treatment of irritable bowel syndrome with diarrhea in phase 3 clinical trials

**Authors:** Chey WD et al.

**Summary:** This group developed a novel drug combining a mu-opioid antagonist and delta opioid antagonist. It is efficacious, but clinicians need to be aware of the risk of acute pancreatitis; the drug may cause sphincter of Oddi (SOD) spasm too. Those overusing alcohol, or with known biliary disease or suspected SOD should not be prescribed this new medication.

Oral presentation: OP166
Abstract

Independent commentary from Nicholas J Talley, MD, PhD, FRACP.

Laureate Professor Nicholas Talley is currently Pro Vice-Chancellor – Global Research at the University of Newcastle. He has published over 850 original and review articles in the peer-reviewed literature, and is considered one of the world’s leading authorities in neuro-gastroenterology and functional gut disorders. Professor Talley was formerly Chair of the Department of Internal Medicine at the Mayo Clinic in Jacksonville, Florida where he held the rank of Professor of Medicine at the Mayo Clinic College of Medicine, and was the Foundation Professor of Medicine at the University of Sydney, Nepean Hospital. Professor Talley is currently the Director of the Gastroenterology Research Unit, University of North Carolina and the Karolinska Institute. He is also a Fellow of The Royal Australasian College of Physicians, Royal College of Physicians (both London and Edinburgh), and the American College of Physicians.
Functional dyspepsia is associated with duodenal eosinophilia in an Australian paediatric cohort

Authors: Wauters L et al.

Summary: This study examined the relationship between dyspeptic symptoms and duodenal eosinophilia in 36 children with functional dyspepsia (epigastric pain or discomfort for more than 2 months with no response to acid suppressants) and 36 controls (nonerosive reflux disease, dysphagia or adolescent rumination syndrome) referred for upper endoscopy. Dyspeptic symptoms were food-related in 69% of patients and nocturnal in 31%. Symptoms occurring more commonly in children with functional dyspepsia than controls were self-reported nausea (64% vs 17%; p < 0.0001), lethargy (19% vs 0%; p = 0.005) and a family history of functional gastrointestinal disorders (28% vs 3%; p = 0.003). Duodenal intraepithelial lymphocyte counts/100 enterocytes were similar in both groups (median 10 vs 12), but duodenal eosinophil counts/mm² were increased in children with functional dyspepsia (151 vs 76; p < 0.001).

Comment: Functional dyspepsia is common but under-recognised. Patients typically present with postprandial fullness or inability to finish a normal sized meal (early satiety) as well as epigastric pain; similar symptoms can occur in gastro-oesophageal reflux disease, which can be confused with functional dyspepsia. The causes of functional dyspepsia are unknown; however, several adult studies but only one paediatric study have observed increased eosinophils in the duodenum in up to 40% of cases. The association has been controversial, but this paediatric Australian study provides independent confirmation that duodenal eosinophilia is a robust finding in functional dyspepsia. Other data suggest duodenal inflammation may occur through inflammatory pathways after gastric function, induce systemic symptoms and respond to eosinophil stabilisation, but all these observations require independent corroboration. Looking for excess eosinophils in the duodenum (which requires the pathologist counting them in five high power fields; normal cut-off less than 22) is becoming accepted practice in a number of major centres.

Poster Presentation: P1732
Abstract

A randomized controlled multicentre study of an incisionless operating platform for primary obesity (POSE) vs. diet-exercise alone: The MILEPOST study

Authors: Turro R et al.

Summary: This prospective, multisite, open label, randomised controlled trial compared the use of the Poset™ procedure (full-thickness plications in the gastric fundus and distal body that modify gastric capacity and function) plus diet and exercise in obese patients (n = 31) to control patients (n = 9) following a diet and exercise programme alone. The two groups had similar BMI values at baseline (36.2 vs 37.1). Mean percentage total body weight loss in treatment was 12.5% in Poset™ treated patients versus 4.6% in controls at 6 months (p = 0.003). Gastric capacity significantly changed in treated patients between baseline and 6 months (p < 0.001) but not in controls.

Comment: With the obesity epidemic, there continues to be great interest in new endoscopic approaches for morbid obesity. Dietary and drug therapy usually fails long term, plus outcomes are at best modest, and anti-obesity surgery has long-term adverse events and some weight gain within three years is common. Injection of botulinum toxin into the stomach is of uncertain value. Several balloons are available to induce satiety and are in trials; these are air or fluid filled and placed endoscopically, while others can be swallowed for placement without the need for endoscopy. A novel approach is POS, placing at endoscopy full thickness plications along the fundus (8 to 9, to reduce normal fundic distention postprandially and induce early satiety) and in the distal body (3 to 4, which may alter motor wave progression). In this open label trial, Poset™ looked promising. The plications appear to persist in most cases longer term, the procedure appeared safe, increased satiety was induced, and Poset provided a modest weight loss advantage over diet (13% versus 5%). More research is needed with this and other endoscopic techniques (e.g. is distal body or antral plication really needed?), but gastroenterology practice in terms of managing obesity is likely to change as more data accumulate.

Oral presentation: OP087
Abstract

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