independantly assessed the level of evidence (EL) using SIGN (Scottish Intercollegiate Guidelines Network) methodology (http://www.sign.ac.uk). CRBSI rates were expressed as per 1000CVC days.

**Results** The search strategy yielded 3142967 hits. Combination searches using 'IF' and 'Child' reduced this to 2993. 14 studies were read in detail; 5 were excluded due to containing purely adult data or where data on PIF could not be analysed seperately. Nine studies were included in our review, 5 of CRBSI prevention and 4 of CRSBI treatment. 8 studies used ethanol alone and 1 reported taurolidine use (Table). 4 studies reported success in prevention of recurrent line sepsis. 2 thrombotic episodes were reported.

**Conclusion** The data for the use of ethanol line locks are limited of poor methodoligical quality and of lower EL (there are no RCT's or well designed cohort studies). However ethanol locks appear to be an effective therapy in CRBSI prevention and treatment. With only 1 study of taurolidine locks no comparison can be made with ethanol locks. Future well designed studies are warranted to compare these two treatments.

**Disclosure of Interest** None Declared.

## PWE-188 PATIENT SELECTION FOR PEG INSERTION: ARE WE MAKING THE RIGHT DECISIONS?

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**Introduction** Careful patient selection is key in the success of percutaneous endoscopic gastrostomy (PEG) procedures[1]. The 30 day mortality rate post insertion is an indicator of appropriate selection in those who are chosen for PEG, but reveals nothing about the patients judged unsuitable for PEG. We evaluated our decision making behind patient selection based on outcomes in those with a PEG inserted and those without.

**Methods** The study identified all patients referred for specialist nurse-led PEG assessment between Jan 2007 – Dec 2011 within our centre. Data regarding age, sex, diagnosis, indication for PEG, date of referral, reason for non-insertion and RIG referrals were stored prospectively on a clinical database and analysed retrospectively. Patients were stratified into groups and mortality in each examined. Further information regarding cause of death and alternative feeding methods were obtained for selected patients from paper and electronic patient notes.

**Results** A total of 555 PEG referrals were received with 38% of all referrals to the PEG team resulting in PEG non-insertion. The 30 day mortality rate following PEG insertion was on average 6.1%; this reduced from 8.6% in 2007 to 2.2% in 2011. 50% of all patients in the non-insertion group had a CVA as their diagnosis. 47% of all non-insertion patients and 83% of insertion patients were alive 120 days after referral. Reasons for non-insertion were grouped into unfit (n = 98, 46% of total), improved (n = 44, 21%), contraindicated (n = 34, 16%) and refused (n = 26, 12%). 74% of those deemed unfit died within 30 days of referral, and 93% of those judged to be improving were alive at 4 months post-referral. RIG referrals were arranged in 19 of 34 patients contraindicated against a PEG procedure. Patient or family refusal was the main reason for non-insertion in 12% of the non-insertion group. 12 notes were examined in patients who died in 60–180 days following PEG referral: 9 had evidence of NG feeding and 3 received RIGs. Extensive MDT input was evident. 4 patients were re-referred to the service for a second assessment if the best option was unclear.

**Conclusion** Patient selection for PEG will continue to be complex. The nurse-led PEG assessment team, in conjunction with other MDT members, make well-informed and justifiable decisions, based on the low 30 day mortality rate post insertion, and that reasons against insertion correlate with how patient condition progresses. Alternative feeding methods are employed in the non-insertion group to combat ongoing nutritional needs. Lack of information on quality of life is the main limitation to the conclusion.

**Disclosure of Interest** None Declared.

### REFERENCE

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## PWE-189 SGLT3A AND GLP-1 DISPLAY A DIURNAL RHYMICITY OF MRNA EXPRESSION IN MOUSE PROXIMAL SMALL BOWEL

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**Introduction** A diurnal cycle is one that recurs every 24 hours. Many physiological processes such as blood sugar levels exhibit diurnal variation. Such processes are under the control of central and peripheral clock genes that have an endogenous rhythmicity, but are entrained (synchronised) by external light and food input cues. Diurnal rhythmicity of gene expression has previously been described in intestinal nutrient/energy transporters such as Sodium Glucose co- transporter-1 (SGLT-1) and Glucose transporter 5 (GLUT-5). SGLT-1 mediates the glucose induced release of glucose-dependent insulinotropic peptide (GIP) and Glucagon like peptide 1 (GLP-1) and therefore has an additional sugar sensing role. Mouse SGLT-3a does not transport sugar and is thus postulated to be purely a sugar sensor. SGLT- 3a, GLP-1 or GIP have not previously been demonstrated to have a diurnal rhythmicity of expression.

**Methods** Sixteen C57BL/6J mice were fed ad libitum under conditions of 12-hour light/dark cycles. Half the animals were randomly euthanized in the morning and half were euthanized in the evening. Duodenal and jejunal tissues were isolated from the carcasses and messenger RNA (mRNA) extracted. Complementary DNA (cDNA) was synthesised from mRNA and underwent real-time (quantitative) PCR. Expression levels for each gene were expressed as a ratio to two housekeeping genes (HMBS and HPRT-1) Relative quantification of gene expression was done using the comparative CT (2-ΔΔCT) method.

**Results** In keeping with previous studies the sugar transporters GLUT-5 and SGLT-1 ($p < 0.005$) and the clock genes Cry- 2 and Bmal-1 ($p < 0.01$) displayed a diurnal rhythmicity of expression in both tissues. For the first time SGLT-3a was shown to display a marked (more than double) up-regulation of mRNA expression in the evening compared to the morning in both duodenum and jejunum ($p < 0.005$). GLP-1 exhibited approximately twice the levels of expression in the evening than in the morning but this was not statistically significant. GIP failed to show any diurnal rhythmicity of expression.

**Conclusion** Demonstrated for the first time was a diurnal rhythmicity of SGLT-3a and GLP-1 expression. It is postulated that sugar sensing by SGLT-3a has an important role in mediating beneficial downstream sequelae such as gut peptide hormone release. Dysregulation of such mechanisms may play important roles in metabolic diseases such as diabetes.

**Disclosure of Interest** None Declared.

## PWE-190 OUTCOME OF INVESTIGATIONS FOR IRON DEFICIENCY ANAEMIA IN MEN UNDER 50 YEARS

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**Introduction** Iron-deficiency anaemia (IDA) occurs in 2–5% of men and postmenopausal women in the developed world. IDA is

commonly due to blood loss from lesions in the gastrointestinal (GI) tract and malabsorption, accounting for 4–13% of referrals to gastroenterologists. In men over the age of 50 years and postmenopausal women there is established data on the incidence of GI pathologies causing IDA but such data for men under 50 years of age is not as robust. We carried out a retrospective analysis of outcomes of investigations for IDA in men under the age of 50 years over a period of 10 years in our hospital serving about 325,000 population.

**Methods** Through the audit and clinical code department all male patients between 17 and 50 years of age investigated for IDA from 2000–2010 were identified retrospectively. The criteria used for diagnosis of IDA included haemoglobin level below the lower limit of normal, low ferritin and corresponding abnormalities of red cell indices. Data on outcome of investigations for IDA was collected from patient case notes and endoscopy, radiology and pathology records.

**Results** 52 patients were identified over the study period. The median haemoglobin was 9.3g/dl. The median age of the patients was 44 years. 44/52 (85%) had investigations recorded. 18/52 (33%) had gastroscopy (OGD) only. 26/52 (48%) had both OGD and colonic investigations. 7/52 (13%) had further investigations following normal bi-directional endoscopy including bone marrow, small bowel barium studies, capsule endoscopy and abdominal ultrasound with none of these additional investigations yielding further diagnostic information. With regards to colonic investigations 21/26 (81%) had colonoscopy, 3/26 (11%) had barium enema plus flexible sigmoidoscopy and 2/26 (8%) had CT scan.

The findings of OGD were normal investigation 25/44 (57%), oesophagitis 5/44 (12%), peptic ulcer disease (PUD) 4/44 (9%), hiatus hernia 4/44 (9%), oesophageal cancer 1/44 (2%) and coeliac disease 2/25 patients with duodenal biopsies at OGD.

The findings of lower GI investigations were normal investigations 16/29 (55%), haemorrhoids 5/29 (17%), inflammatory bowel disease (IBD) 3/29 (10%), polyps 2/29 (7%), colorectal cancer 2/29 (7%) and diverticulosis 1/29 (4%).

**Conclusion** Significant findings including PUD, malignancy and IBD constituted 19.2%. Malignancy accounted for 5.8% and this was comparable with previously reported prevalence of GI malignancy in patients with IDA (6–13%). In addition a proportion of investigations also yielded other diagnosis including oesophagitis and coeliac disease. Therefore it will be justified to investigate men under 50 years with IDA similarly to those over 50 years and postmenopausal women as suggested in most international guidelines

**Disclosure of Interest** None Declared.

## PWE-191 IS GASTROPEXY AN ALTERNATIVE TO RADIOLOGICAL GASTROSTOMY? A SINGLE CENTRE EXPERIENCE

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**Introduction** Standard inside-out PEG insertion is not always technically possible or safe especially when there is narrowing of the oesophagus or pharynx with head-and-neck or oesophageal cancers. There is also concern about tumour seeding with inside-out technique. Similarly, in some patients it is not possible to pass the standard gastroscope through to upper GI tract. Gastropexy is an alternative technique which allows insertion of a gastrostomy tube with outside-in technique and can be performed using slimmer scopes. Gastropexy has been routinely performed in our unit for some time and therefore we aimed to review the experience of Gastropexy insertion in our unit.

**Methods** Gastropexy placement in our unit is based upon a previously described technique using Kimberly Clark MIC introducer kit. A standard endoscopy is performed by the oral or nasal route, a site identified and the stomach secured against the anterior abdominal wall with 3 pre-loaded T-toggles which can be fastened with a locking disc. A tract is formed using a single serial dilator passed over a guidewire and a 14F balloon gastrostomy inserted through the dilator and secured. The outer sheath of the dilator will then be peeled out. All patients receive pre-procedural prophylactic antibiotics. A retrospective review of all gastropexy procedures between June 2009 and November 2012 was carried out. Patient demographics, indication, sedation requirements and complication rates were recorded.

**Results** 45 procedures were carried out on 42 patients (28 males, median age 63 years range 56 – 84) with a technical success rate of 95.7% for placement. Indication for placement was head-and-neck cancer (n = 34), oesophageal stricture/cancer (n = 9) and neurological (n = 2). 17% of procedures were performed under general anaesthesia as part of another surgical procedure with the remainder having conscious sedation (mean doses midazolam 3.8mg and pethidine 17.8mg). 58% of procedures were performed using a nasal/neonatal endoscope. Of these, 62% cases had head-and-neck cancer, 31% had oesophageal cancer/stricture. One patient had a minor gastric fluid leak and one patient developed a pneumoperitoneum both of which were managed conservatively. At 7 days, 1/45 (2.2%) had a site infection and 1/45 (2.2%) had died whereas at 28 days, 5/45 (11.1%) had a site infection and 4/45 (8.8%) had died. Mortality at 1 year was 48%, with median survival of 5 months. The primary pathology in all the patients who died was head and neck or oesophageal cancer. None of the deaths were procedure related.

**Conclusion** Gastropexy is a suitable alternative in patients with difficult access and can be inserted with high success rate and low complication rates. Ideally, a randomised trial comparing gastropexy and radiological gastrostomy insertion should be undertaken.

**Disclosure of Interest** None Declared.

## PWE-192 DOES FIBRE REDUCE THE RISK OF CLOSTRIDIUM DIFFICILE DIARRHOEA IN NASOGASTRIC FED PATIENTS?

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**Introduction** Tube-feeding has previously been associated with an increased risk of *Clostridium difficile* (*C. difficile*) diarrhoea.[1] The absence of dietary fibre has been suggested as a possible cause, but not yet formally assessed in patients fed via a nasogastric (NG) tube. The objective was to determine if there is a difference in acquisition of *C. difficile* between fibre and fibre-free NG feeds.

**Hypothesis** Fibre-free NG feeds are associated with a higher rate of *C. difficile* infection than fibre containing feeds.

**Methods** This was a Retrospective Cohort Study, using data from NG-fed patients in one trust from May to November 2010.

**Results** It was found that 8 of 169 patients in the fibre-fed group had *C. difficile*, compared with 15 of 202 in the non-fibre fed group, equating to 4.7% and 7.4% detection of *C. difficile* respectively, p value 0.39. Antibiotic usage was similar in both groups. Patients who received fibre free feeds were more likely to develop diarrhoea than those receiving fibre containing feeds (p = 0.0112).

**Conclusion** The results show a trend towards fibre reducing the risk of *C. difficile* diarrhoea. However the effect appears to be subtle, as it failed to reach statistical significance despite the inclusion of over 160 patients in both groups. The previous finding of a link between fibre free NG feeding and *C. difficile* acquisition may have been due to increased rates of diarrhoea. Fibre reduced the risk of diarrhoea, which may reduce the apparent risk of *C. difficile* when compared with the fibre free group, as in the latter there is a potential for *C. difficile* spore shedding from asymptomatic carriers.

**Disclosure of Interest** None Declared.