

puncture gastropexy placement as per the British Society of Gastroenterology guidelines published in 2010<sup>1</sup>. On introduction of the new technique we observed that standard sedation with intravenous pethidine and midazolam often led to patients tolerating the procedures poorly and occasionally to the procedures being abandoned. Therefore a decision was made to continue these procedures with 'deep' sedation supervised with a consultant anaesthetist using remifentanyl, midazolam and diamorphine. We present our data for the 18 months until January 2013 using deep sedation.

**Methods** The details of all patients attending for gastropexy procedures in East Kent between June 2011 and 11th January 2013 were reviewed to assess the type of sedation used, patient comfort (measured using the modified Gloucester score and assessed by the endoscopy nursing staff post-procedure) and complications.

**Results** 35 patients (M: 31, F: 10, mean age 61, range 43yrs-72yrs) underwent gastropexy procedures under deep sedation.

The mean time taken to perform the procedure under deep sedation was 23.3 minutes +/- standard deviation of 4.6 minutes. Range from 14–29 minutes.

A total of 27 patients reported no discomfort and were resting comfortably throughout the procedure. 4 cases recorded to have experienced one or two episodes of mild discomfort but had tolerated the procedure well and 4 cases of minimal discomfort were reported, again the procedure was well tolerated. There were no reported complications (immediate or late).

**Conclusion** Patients with head and neck cancers undergoing gastropexy procedures tolerate these procedures far better under deep sedation. We would recommend that such an approach improves the welfare of our patients and recommend its use to colleagues.

**Disclosure of Interest** None Declared.

#### REFERENCE

1. Westaby *et al.* The Provision of a Percutaneously Placed Enteral Feeding Tube Service. *Gut* 2010; 59: 1592-1605

#### PWE-186 EFFECTIVE, SAFE MANAGEMENT OF STARVED PATIENTS WITH ANOREXIA NERVOSA THROUGH A COMBINED MEDICAL & PSYCHIATRIC APPROACH-MEETING THE MARSIPAN CHALLENGES

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**Introduction** Anorexia Nervosa (AN) has the highest mortality rate of any psychiatric condition. These patients are a challenge to manage because of severe physical and psychiatric morbidity. MARSIPAN reported that some patients with severe AN admitted to medical wards were deteriorating & occasionally dying because of delays in treating their medical conditions due to obstructive behaviours relating to their psychiatric morbidity<sup>1</sup>. It recognised a need for specialist teams including a psychiatrist and physician with an interest in eating disorders. There is a medical team providing in-patient medical management at University Hospital North Tees (UHNT) with support from the community eating disorders (ED) team.

**Methods** A retrospective audit of management of AN admissions due to starvation (BMI 13 or less) to UHNT June 2010-June 2012. Data collected from medical notes-audited against MARSIPAN standards.

**Results** 10 patients identified, all female. Age 18–43 (median 24.5). 9 known to ED service. Median admission BMI 12.8 (9.7–13). **Assessment:** All had recommended blood tests. 8 had an ECG; 2 abnormal (long QTc, heart block). **Monitoring:** 9 had appropriate electrolyte monitoring. All weighed twice weekly & had complete fluid balance charts. **Management:** 8 seen by ED physician within 48 hours

(5 within 24 hrs), 6 seen by dietitian by 48 hours. All received pabrinex, 9 vitamin B & multivitamins. 4 did not receive DVT prophylaxis. All reviewed at least weekly by psychiatric ED team. 7 NG fed, 4 began NG feed within 24 hours, all established by 48 hours. 7 required electrolyte replacement. **Complications:** Re-feeding syndrome (7), pneumonia (2), ITU admissions (2; pneumonia, abnormal electrolytes). 3 exhibited problematic behaviour; 2 required 1 to 1 nursing. All complications recognised early. **Discharge:** All had discharge plans agreed by the ED team, 5 discharged to the ED unit.

**Conclusion** The ED team at UHNT provides a successful specialist service for the medical care of patients with severe AN. A median admission BMI of 12.8 indicated early identification & intervention of at risk community patients through this integrated approach. Patients are appropriately assessed & monitored & NG feeding is quickly established. Management of these patients by the multidisciplinary team enables the medical and behavioural challenges to be dealt with effectively and ensures timely discharge once medically stable. Through the development of trust guidelines we hope to further improve care of this vulnerable group.

**Disclosure of Interest** None Declared.

#### REFERENCE

1. MARSIPAN: Management of Really Sick Patients with Anorexia Nervosa, College Report 162, Royal College of Psychiatrists and Royal College of Physicians London, October 2010

#### PWE-187 ETHANOL AND TAULOLIDINE LINE LOCKS FOR THE REDUCTION AND TREATMENT OF CATHETER RELATED BLOOD STREAM INFECTIONS IN PAEDIATRIC INTESTINAL FAILURE: A SYSTEMATIC REVIEW

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**Introduction** Paediatric intestinal failure (PIF) patients are often dependent on home parental nutrition (HPN) and rely upon a central venous catheter (CVC) for its administration. There is a significant risk of catheter-related blood stream infections (CRBSI) with associated morbidity and mortality. Studies have suggested that the use of specialist line locks with ethanol or taurolidine may significantly reduce CRBSI for PIF. Our aim was systematically review the evidence for effectiveness of ethanol and taurolidine line locks in the prevention or treatment of CRBSI in PIF.

**Methods** Systematic retrieval of data from studies of PIF (PN > 28 days, age < 18yr). Outcome measures were the reduction in rates of CRBSI or eradication of CRBSI. Electronic searches of the Cochrane Library, MEDLINE (1946–Jan 2013) and PUBMED (to Jan 2013) were made using keyword and MeSH terms 'Intestinal failure' 'child' 'ethanol locks' and 'taurolidine locks'. Hand searches of meetings of relevance and personal collections were also performed. Two authors

#### Abstract PWE-187 Table 1

Name	Intervention	EL	Patients	Reduction in CRBSI rate per 1000CVC days or treatment outcome
Jones	70% ethanol	2-	23	9.9 to 2.1
Wales	70% ethanol	2-	10	10.2 to 0.3
Pieroni	70% ethanol	3	6	Prevention of recurrence of fungal sepsis
Blackwood	70% ethanol	3	2	No recurrence of fungal sepsis
Cober	70% ethanol	2-	15	7.9 to 0.5
Onland	70% ethanol	3	9	Eradication of Rx resistant CRBSI
Mouw	70% ethanol	2-	5	11.5 to 2.3
McGrath	70% ethanol	3	7	Eradication of Rx resistant CRBSI
Chu	Taurolidine	2-	19	8.6 to 1.2

independently 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 separately. Nine studies were included in our review, 5 of CRBSI prevention and 4 of CRBSI treatment. 8 studies used ethanol alone and 1 reported tauridolone 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 methodological 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 tauridolone 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<sup>1</sup>. 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

1. Kurien M, McAlindon ME, Westaby D, Sanders DS. Percutaneous endoscopic gastrostomy (PEG) feeding. *Bmj*. 2010 May 7; 340(may07 2):c2414–c2414.

### PWE-189 SGLT3A AND GLP-1 DISPLAY A DIURNAL RHYTHMICITY 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- $\Delta\Delta$ CT) 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