

variability in thermal sensitivity between healthy subjects, we could not find a significant correlation between impedance and perception parameters in the proximal or distal oesophagus.

#### Abstract PTU-131 Table 1

	Temperature at PDT (°C)	AUC (°C*s)	Time to PDT (s)
Distal Oesophagus	53.7 ± 2.7	698.8 ± 241.3	85.1 ± 15.5
Proximal Oesophagus	54.3 ± 2.3	743.5 ± 201.9	87.8 ± 11.7

**Conclusion** A novel Peltier-based thermal stimulator device can accurately and reproducibly determine oesophageal thermal sensitivity. In healthy subjects we could not demonstrate a correlation between basal impedance and sensitivity to heating. Current experiments are assessing this correlation in NERD patients with hyper-sensitivity to acid.

**Disclosure of Interest** None Declared

#### PTU-132 CARBONATED SOLUTIONS ARE SUPERIOR TO SOUR SOLUTIONS IN MODIFYING HUMAN SWALLOWING REACTION TIME PERFORMANCE

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<sup>1</sup>O Elshukri, <sup>1</sup>E Michou, <sup>1</sup>S Mistry, <sup>1</sup>S Hamdy. <sup>1</sup>Gastrointestinal Sciences, Institute of Inflammation and Repair, University of Manchester, Manchester, UK

**Introduction Background/Aims** Clinical evidence supports a role for carbonated liquids in reducing aspiration in dysphagic patients compared to simple water (Bulow *et al* Acta Radiologica, 2003). However, there are limited data on how carbonation modulates swallowing performance. Here, we investigate the effects of equi-pH carbonated and sour (citric acid) water solutions on swallowing performance using a reaction time task (Mistry *et al* J Physiol.2007), in healthy volunteers.

**Methods** Twelve healthy participants (6 male, 33±4 years, mean±SEM) visited the laboratory on three separate occasions. Subjects were asked to perform 5 consecutive measurements of swallowing behaviour with 10 normal, 10 fast and 10 challenged swallows per measurement (within a pre-determined time-window). For each task, subjects swallowed each of three solutions: carbonated, sour/citric acid and still water solutions with each attendance in a randomised order. The 5 blocks of 30 swallows were repeated over a 1 hour period at 0, 15, 30, 45 and 60 minutes to control for fatigue and practise confounding variables. Measurements were performed through an intra-pharyngeal catheter with built-in pressure transducers to record change in pharyngeal pressure. A pair of electrodes on the back of subject's hand was used to deliver an electrical pulse to cue the subject when to swallow. Subjects were invited for an additional visit to complete a 'taste intensity' questionnaire. Data were analysed with non-parametric Wilcoxon's test in SPSS16.

**Results** Mean swallowing latencies of both normal and fast swallows were not significantly different across the three different sessions. However, for the challenged swallowing task, compared to still water, carbonated water significantly improved the number of correct swallows ( $Z = -2.044$ ,  $p = 0.041$ ). By contrast, sour (citric acid) solutions had no effects on challenged swallowing compared to still water [citric acid\*water ( $Z = -0.045$ ,  $P = 0.9640$ )], despite being similar to carbonated water [citric acid\*carbonated ( $Z = -1.293$ ,  $p = 0.196$ )]. Carbonated solutions also had the highest intensity score being greater than both sour and still water [carbonated\*water ( $Z = -3.517$ ,  $P = 0.000$ ), carbonated \*citric acid ( $Z = -3.520$ ,  $p = 0.000$ )].

**Conclusion** Carbonation appears to alter swallowing performance compared to other liquids by improvement in complex tasks and showed greatest perceived taste intensity. These data support the using of carbonation as treatment option for dysphagic patients in

preventing aspiration and lay the basis for further clinical research with carbonation on swallowing function.

**Disclosure of Interest** None Declared

#### REFERENCES

1. Bulow *et al*. Acta Radiologica., 2003
2. Mistry *et al*. J Physiol., 2007

#### PTU-133 GOBLET CELL CARCINOMA OF THE APPENDIX: ACUTE VS CHRONIC PRESENTATIONS

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<sup>1</sup>R Basuroy, <sup>1</sup>A Ngu, <sup>2</sup>L Mills, <sup>3</sup>H El-Mahallawi, <sup>4</sup>T Cecil, <sup>1,2</sup>J K Ramage. <sup>1</sup>Department of Gastroenterology, Hampshire Hospitals NHS Trust, Basingstoke; <sup>2</sup>Neuroendocrine Tumour Service, Institute of Liver Studies, Kings College Hospital, London; <sup>3</sup>Department of Pathology; <sup>4</sup>Pseudomyxoma peritonei Service, Hampshire Hospitals NHS Trust, Basingstoke, UK

**Introduction** Goblet Cell Carcinomas (GCC) are a rare neuroendocrine tumour (NET) of the appendix. The experience of a National Specialist Centre's for pseudomyxoma peritonei (cytoreductive surgery) and two regional NET services with patients with GCC are presented.

**Methods** A retrospective audit was performed of patients with histologically proven GCC collated from histology, NET and cytoreductive surgery databases. Mortality rates (%) for subgroups were calculated.

**Results** 16 patients (female = 9) were included for analysis with median age at diagnosis of 58 years (range, 25.5–71.8). The mortality rate was 25% (n = 4) associated with median survival of 22 months (range, 9–72) following diagnosis. The most common symptoms were acute appendicitis-like (62.5%), chronic abdominal pain (50%), bowel obstruction (25%) and chronic diarrhoea (12.5%). Patients presenting with acute appendicitis-like symptoms had the lowest mortality rate at 10%. Bowel obstruction, chronic abdominal pain and chronic diarrhoea were associated with mortality rates of 50%, 38% and 50% respectively. Completion right hemicolectomy (n = 10) was associated with decreased mortality (22% vs 40%). Bilateral salphingo-oophrectomy (n = 5) was associated with increased mortality (66% vs 0%). The mortality rate associated with chemotherapy (n = 6) and cytoreductive surgery (n = 4) was 17% and 50% respectively.

**Conclusion** Patients with GCC who present acutely have better outcomes than those with chronic symptoms suggesting different disease processes. Performing a completion right hemicolectomy is associated with benefit, while the role of BSO is less clear.

**Disclosure of Interest** None Declared

#### PTU-134 PREVALENCE AND INVESTIGATIONAL PATHWAYS OF PATIENTS WITH CONSTIPATION PREDOMINANT IRRITABLE BOWEL SYNDROME

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<sup>1</sup>S Lin, <sup>1</sup>M Kurien, <sup>1</sup>I Aziz, <sup>1</sup>S Winfield, <sup>1</sup>N Rugg, <sup>1</sup>A Kelsall, <sup>1</sup>J S Leeds, <sup>1</sup>D S Sanders. <sup>1</sup>Department of Gastroenterology, Royal Hallamshire Hospital, Sheffield, UK

**Introduction** Our group has previously described investigational pathways that occur in patients with diarrhoea predominant irritable bowel syndrome (IBS-D). Currently, there is a paucity of work undertaken in either primary or secondary evaluating patients with constipation predominant irritable bowel syndrome (IBS-C). This study evaluates the population prevalence of IBS-C, determining also the investigational pathways that occur in these patients.

**Methods** We prospectively collected data from 3 groups of patients between April 2005 and November 2012. Group 1 (n = 1002) were healthy volunteers, Group 2 (n = 64) were patients fulfilling Rome III criteria for IBS-C, with Group 3 (n = 403) being patients fulfilling