

PWE-167 ANVIL SUTURE PULL-THROUGH TECHNIQUE FOR LAPAROSCOPIC CIRCULAR STAPLED OESOPHAGOJEJUNOSTOMY: TECHNICAL REPORT AND OUTCOMES

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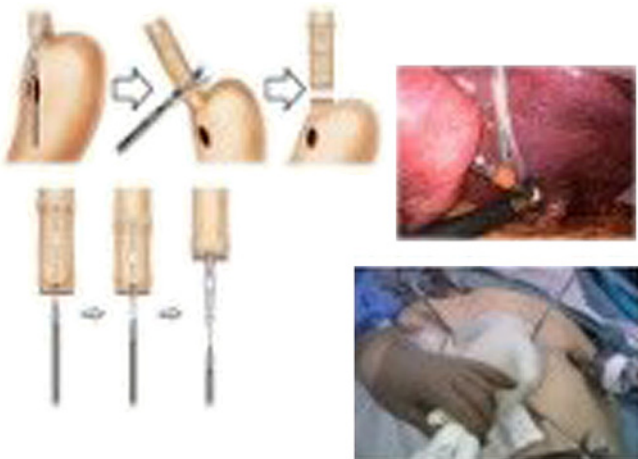
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Introduction The development of laparoscopic gastrectomy has led to the need for intracorporeal stapled oesophagojejunostomy. Described techniques include overlap with a linear stapler¹ and oral insertion of the anvil of a circular stapler.² At our unit, we use a novel technique for laparoscopic oesophagojejunostomy by laparoscopic insertion of anvil into the gastrointestinal tract. Here we present our outcomes from laparoscopic oesophagojejunostomy performed by the anvil suture pull-through technique.

Methods After attaching a suture to the end of the spike of the anvil of a circular stapler, the anvil is inserted into the gastrointestinal tract through a proximal gastrotomy and pushed into the distal oesophagus. The oesophagus is divided below the anvil with a linear stapler. The suture poking out of the staple line is pulled and a small incision is made to allow the spike of the anvil to be delivered. The body of the circular stapler is inserted into the jejunum and combined with the anvil before firing the stapler and completing the double-stapled anastomosis. Intracorporeal oesophagojejunostomy using this technique was performed during laparoscopic proximal and total gastrectomy between 1998 and 2011.

Results A total of 82 anastomoses were performed using the anvil suture pull-through technique as part of 35 total and 47 proximal gastric resections for gastric cancer. 69 patients (84%) had early gastric cancer. Anastomotic leakage occurred in three patients (3.7%) and stenosis occurred in seven patients (8.5%). Post-operative stasis occurred in one patient (1.2%). No anastomotic bleeding was encountered. Recurrence at the site of the anastomosis was not detected during routine follow-up endoscopy in any of the patients.

Conclusion Intracorporeal oesophagojejunostomy using our anvil suture pull-through technique is feasible, safe and associated with good outcomes in the context of early gastric cancer. It is a reliable first-line technique and a useful alternative strategy when overlap is not possible or oral anvil insertion is contraindicated.



Abstract PWE-167 Figure 1

Competing interests None declared.

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PWE-168 PALLIATIVE RESECTION FOR ADVANCED GASTRIC AND JUNCTIONAL ADENOCARCINOMA (AGJA): WHICH PATIENTS WILL BENEFIT FROM SURGERY?

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Introduction Whereas palliative chemotherapy offers median survival of 10 months in AGJA, the survival impact of associated primary tumour resection is controversial. The objective of this study was to identify which patients with AGJA will benefit from palliative resection.

Methods Among 3202 patients with GJA registered in 19 French centres between January 1997 and January 2010 and scheduled for surgery, 677 benefited from palliative tumoural resection. Patients' characteristics were compared between palliative and curative groups. In the palliative group, prognostic factors were identified and the impact of each combination of these factors on survival was studied.

Results Median survival of AGJA patients resected with a palliative intent (n=677) was longer than in non-resected patients (n=532) (12.9 vs 8.5 months, p<0.001). Among resected patients, surgery was defined as palliative due to metastasis (n=150, 5.6%), localised (n=122, 4.6%) or diffuse (n=62, 2.3%) peritoneal carcinomatosis (PC), or incomplete tumoural resection (n=343, 12.8%). Overall median survival was 30.0 months, significantly shorter after palliative than curative resection (11.9 vs 48.2 months, p<0.001). Predictors of postoperative mortality were ASA score III–IV (p<0.001) and palliative resection (p=0.020), justifying palliative resection only in ASA I–II patients. Independent prognostic factors in the palliative group were solid organ metastasis (p=0.009), localised PC (p=0.004), diffuse PC (p=0.046) and signet ring cell histology (SRC) (p=0.020). In ASA I–II patients, patients with diffuse PC, metastasis combined with PC or localised PC of SRC had median survivals from 1.3 to 9.3 months. Patients with incomplete resection without metastasis or PC, organ metastasis without PC, or localised PC without SRC had median survival from 12.0 to 18.3 months.

Conclusion In AGJA, only ASA I–II patients, presenting with limited tumoural extension will benefit from palliative resection in combination with chemotherapy. Other clinical presentations have to be enrolled in exclusive palliative chemotherapy programs.

Clinical trial registration number Clinical Trial.gov identifier NCT01249859.

Competing interests None declared.

PWE-169 ANALYSIS OF FAECAL VOLATILES FROM YOUNG CHILDREN INFECTED WITH AND WITHOUT ROTAVIRUS

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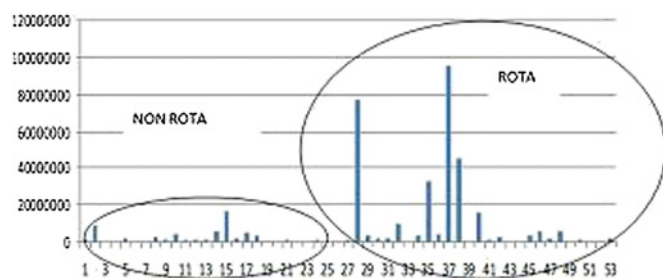
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Introduction Rotavirus is the most common cause of severe diarrhoea among infants and young children. Rotavirus is usually an easily managed disease of childhood, but worldwide nearly 500 000 children under 5 years of age still die from rotavirus infection each year and almost two million more become severely ill. Rotavirus A (responsible for about 90% of infections) is typically diagnosed by finding the virus in the child's stool by enzyme immunoassay. This study was undertaken to expand our knowledge of VOCs from the stool of children and assess whether rotavirus causes easily measurable changes in the gut chemistry of infected young children.

Methods The volatile organic compounds (VOCs) from the stool of 53 children from Malawi (26 non-infected children with an unspecified GI problem and 27 rotavirus children diagnosed with the virus) were analysed using Headspace Trap-GC/MS. The faecal samples were placed in headspace vials and were heated from frozen to 90°C. The VOC's were preconcentrated and focused prior to GC/MS analysis. Those VOCs were identified by comparing their mass spectra with those contained in the NIST/EPA/NIH Mass Spectral Database.

Results A total of 186 different compounds have so far been identified. Of the 53 stool samples ethanol was found in 69% and 63% samples respectively between the non and infected classes, which contrasts with previous work where ethanol was found in all healthy adult and all healthy neonate stool. This could be due to the more dilute stool due to diarrhoea. Carbon disulphide has previously been found to be ubiquitous in healthy adult stool, again the frequency was much less at 27% and 22% respectively. In contrast the majority of samples contained ethanoic acid, with more samples in the rotavirus group. There were very little differences in the frequency (ca. 92%) and abundance of ethanol in both sample classes, curiously ethanol has been previously shown to be present in all adult samples and absent in neonates. In contrast 2,3-butanedione and other aldehydes were significantly present both at greater frequency and typically at higher concentrations in rotavirus samples compared to non-rotavirus samples, see Abstract PWE-169 figure 1.



Abstract PWE-169 Figure 1 Combined peak area (arbitrary units) of selected carbonyl compounds (namely; 2,3-butanedione/propanal/2-heptenal, (Z)-/octanal/nonanal combined) present in faecal samples analysed.

Conclusion Very little work has been published on volatile compounds from stool in particular from the stool of children, this work adds to this knowledge. Some compounds such as ethanol were found in approx. equal amounts in the diarrhoea of infected and non-infected stool, however in general there was a greater frequency and abundance of VOCs in the rota infected samples, particularly of aldehydes and 2,3-butanedione.

Competing interests None declared.

PWE-170 PROTON PUMP INHIBITORS AND CLOPIDOGREL COMBINATION: IS THERE ANY RISK?

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Introduction Dual anti-platelet therapy (DAT) with aspirin and clopidogrel is prescribed up to 1 year following Acute Coronary Syndrome (ACS). Proton Pump Inhibitors (PPIs) are often used in selective patients to reduce the risk of gastrointestinal (GI) bleeding. Some studies have suggested that there is a possible interaction between PPIs and clopidogrel resulting in an adverse cardiac event rate. Main objective of this study was to determine if prescription of PPIs in ACS patients on dual anti-platelet therapy results in increased cardiac events compared to patients not receiving PPIs.

Methods A retrospective observational, comparative study of 200 admissions with ST elevation myocardial infarctions (STEMIs) and non-ST elevation myocardial infarction (nSTEMIs) over a period of 1 year. Patients were divided in two groups: PPI group (Patients on DAT and PPIs) and Non-PPI group (Patients on DAT only). End points were readmissions with ACS or death.

Results Mean age was 67 (24–96), 65% male and 35% female, 75% Caucasian and 25% Asians. 27 patients were excluded (24 patients not receiving DAT, 3 patients on H2 antagonist). For PPI group (54% on lansoprazole, 35% on pantoprazole and 11% on omeprazole), baseline characteristics were (Patient number—89, 27-STEMIs, 62-nSTEMIs; mean age—69) whereas the corresponding values for non-PPI group were (Patient number—84, 38-STEMIs, 46-nSTEMIs, mean age—63). Mean GRACE score at admission (predictor of death or MI in 6 months) was 29% for PPI group whereas the corresponding value for the non-PPI group was 27% ($p=0.075$). 26 patients were re-admitted with ACS, 20 in PPI group and six in non-PPI group (OR 3.76, 95% CI 1.43 to 9.92, z statistic 2.68, $p=0.007$). Five deaths due to ACS were observed, four in PPI group and one in non-PPI group (RR 3.77, 95% CI 0.43 to 33.09, $p=0.23$).

Conclusion This study suggests that there is an association between PPIs and clopidogrel resulting in increased readmission with acute coronary syndromes but not in increased mortality. Larger scale studies are required to confirm or refute these observations.

Competing interests None declared.

PWE-171 STRUCTURE-FUNCTION ANALYSIS OF POLYMORPHIC VACA TOXIN VARIANTS FROM *HELICOBACTER PYLORI* USING A RECOMBINANT APPROACH

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Introduction The Gram negative bacterium *Helicobacter pylori* persistently colonises the stomachs of around half the world's population. It causes chronic asymptomatic gastritis, and leads to peptic ulceration and gastric cancer in a small proportion of cases. One of the key factors influencing the development of more severe pathology and disease is the expression of virulence factors by the colonising strain. The vacuolating cytotoxin, VacA, is a major determinant of *H. pylori* pathogenicity and is highly polymorphic. Strains producing more active forms of VacA (i1 types) are more strongly associated with gastric cancer than strains producing less toxigenic VacA (i2 types).¹ The i-region polymorphism is characterised by 10 amino acid substitutions and a serine-asparagine-glutamine (SNQ) tri-peptide insertion in i2. We aimed to further characterise the structure and function of this important region.