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PWE-062 GASTROSCOPY WITHOUT A GASTROSCOPE! FEASIBILITY IN A PORCINE MODEL USING A MAGNETIC CAPSULE

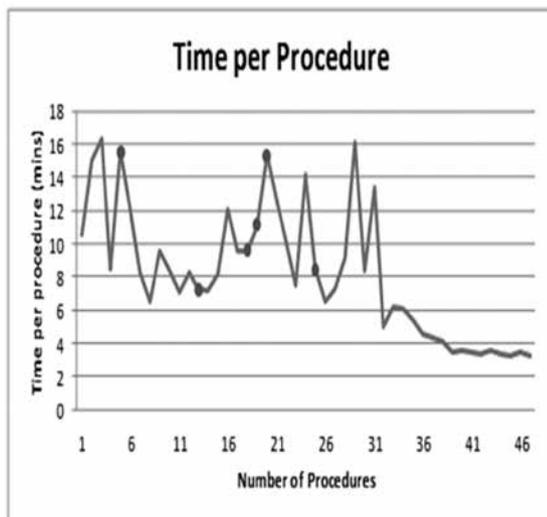
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Introduction There is little evidence that gastroscopy affects patient outcomes¹, but it is uncomfortable and incurs the risk of intubation and sedation. Capsule endoscopy is a non-invasive tool used primarily to image the small and large bowel. Although a large volume organ, examination of the stomach might be enabled by magnetic control allowing manoeuvrability and positional change.

Methods A standard porcine stomach model, commonly used for endoscopy training purposes was used in a feasibility study of magnetically steerable capsule endoscopy. Different coloured/shaped beads were sewn into each major location of the stomach (cardia, fundus, greater and lesser curve, anterior and posterior wall, antrum and D1). The stomach was distended with 1000mls of water. Endoscopy was performed according to a set protocol using a handheld magnet, Mirocam Navi (Intromedic Ltd), positional changes (supine, 30° right lateral, head down, 30° left lateral) and a “real time” viewer. The order and time each tag was identified was recorded alongside the total procedure time.

Results All stomach tags were identified in 87.2% (41/47) of examinations. Missed tags (marked in figure as red dots, representing an incomplete examination) included antrum (3/6), cardia (2/6) and posterior wall (1/6): none were missed in the latter 25 procedures. Mean examination times for the first 23, second 23 and all procedures were 10.28, 6.26 ($p < 0.001$) and 8.27 (3.25–16.32) minutes and all were completed by 4 mins after 39 procedures. The order in which tags were identified in the mid-body of the stomach (greater, anterior and posterior) was variable and interchangeable. If this area was considered as one site, the order of tag identification would be: cardia (1), fundus (2), mid body (3), lesser curve (4), antrum (5) and D1 (6) in 76.6% of examinations. No difficulties were observed with the current procedure protocol and therefore no modifications recommended.



Abstract PWE-062 Figure

Conclusion Examination of the upper gastrointestinal tract is feasible using a magnet and positional change as demonstrated in this porcine model. A learning curve was evident and this model might be used for training in the future. Further investigation using porcine models and in humans is necessary to fully realise the scope of this exciting novel technology.

Disclosure of Interest None Declared.

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PWE-063 EVALUATION OF A PREVIOUSLY DESCRIBED SCORING SYSTEM FOR PREDICTING COMPLICATIONS POST ERCP

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Introduction Endoscopic retrograde cholangiopancreatography (ERCP) is widely performed for the management of biliary and pancreatic duct disorders. Despite this, ERCP is associated with a significant complication rate, with the literature reporting rates of post-procedural pancreatitis of 1–5%, cholangitis in 1–5% and haemorrhage in 1%. A previous study (Jeurnink *et al* 2011¹) described a prognostic model for predicting those patients at greater risk of developing post ERCP complications, and identifying those who may be safely discharged shortly after ERCP. The aim of this study was to validate this scoring system in an external cohort to assess whether it can be used in general clinical practise.

Methods Details of all patients undergoing ERCP over the 22 month period from May 2010 to February 2012 were recorded on an institutionally approved database. Electronic records were subsequently accessed to identify post ERCP complications within 30 days of procedure. The predictive score as described was retrospectively calculated and applied to all patients, with a score > 3 being considered high risk. Sensitivity, specificity, negative and positive predictive values were then calculated.

Results 697 patients (409 females, mean age 64, mean ASA grade 2.35) underwent ERCP during the study period. The overall complication rate was 9.0% (63/697); cholangitis 2.3% (n = 16), pancreatitis 2.1% (n = 15), bleeding 1.6% (n = 11), perforation 1.3% (n = 9) and miscellaneous in 1.7% (n = 12). The mortality rate was 0.4% in our cohort (n = 3). 681/697 (97.7%) had a predictive score < 4 but ERCP grade 1/2/3 was 531/149/17 respectively. Of those with a predictive score ≥ 4, 12.5% (n = 2/16) developed a post-ERCP complication (both severe pancreatitis) versus 8.4% (n = 57/681) with a score < 4 ($p = ns$). Using the predictive score gave a sensitivity of 3.4%, specificity of 97.8%, positive predictive value of 13% and a negative predictive value of 92%.

Conclusion The predictive scoring system as previously described does not accurately stratify patients into high or low risk groups or predict post-ERCP complications in our cohort. This may be due to case mix in the original cohort leading to lack of generalisation. Further work is needed to formulate a clinically applicable scoring system which has higher accuracy.

Disclosure of Interest None Declared.

REFERENCE

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PWE-064 UK WIDE SURVEY ON THE PREVENTION OF POST-ERCP PANCREATITIS

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