

data to inform scenario selection and debriefs. We developed learning resources including a faculty information sheet, pre and post course questionnaires, scenario descriptions and an introductory presentation. We procured an OGD and colonoscopy simulator and invited a patient actor to contribute to scenarios and debriefs. Video feedback was used to inform peer-led discussions. We collected quantitative and qualitative pre and post course data including participant demographics, and Likert scores for course enjoyment, usefulness, relevance and realism. Data was analysed descriptively.

Results A total of 47 endoscopy staff participated in the courses (course size 8–15), including 32 nurse assistants, 11 endoscopists, 3 health care assistants and 1 porter. 70% were female, 55% were aged 35 to 50 and 60% had less than 5 years experience in endoscopy. Post course data analysis showed high Likert scores across all measured domains (1 poor – 5 excellent): 4.74 (enjoyment), 4.81 (usefulness), 4.80 (relevance), 4.33 (realistic). 85% felt that their confidence in managing similar situations in real life had improved. Qualitative data was universally positive, and included: “quality feedback”, “makes you reflect on better practice”, “shared learning”, and “there is a real need for courses such as this”.

Conclusion Endoscopy teams value simulation based multiprofessional learning platforms for human factors training. We believe that 3 key features enhanced learning and course effectiveness: in-situ delivery of courses with established teams, empowering team members of all professional backgrounds to voice clinical concerns, and active participation with supported feedback. We believe that multiprofessional learning platforms have an important place in healthcare improvement and endoscopy teams are well placed to benefit.

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Disclosure of Interest None Declared.

PTU-014 THE USE OF KINEMATIC ANALYSIS OF BILE DUCT CANNULATION AS A MEANS OF OBJECTIVELY ASSESSING ENDOSCOPIC SKILL AT ERCP

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Introduction Training in ERCP has become more challenging due to a reduction in diagnostic cases following the introduction of MRCP. There is a need to explore options to assist with basic training and the assessment of competency. There are currently no validated objective tools for this purpose. Simulators have been shown to enhance surgical skill and some there is some evidence to suggest that they can assist training in ERCP.¹ Kinematics, the study of motion, has been used in the objective assessment of surgical skill and endoscopic skill during colonoscopy on simulators but no studies have been done on ERCP.²

Methods 23 candidates perform bile duct cannulation on a modified ERCP simulator. Endoscopic experience ranged from complete novices to HPB consultants. Radiofrequency sensors were attached to the duodenoscope tip and catheter, and the procedures were videoed. Six parameters were measured from a starting point at the pylorus until bile duct cannulation was achieved. These included mean speed, total distance travelled,

trajectory corrections, time to cannulation, time spent planning and number of papilla contacts. A performance score was calculated so that, with the exception of mean speed, a decrease in each parameter equated to an exponentially higher score, equating to greater skill.

Results Kinematic data showed that HPB consultants performed better than other participants at all 6 measures used to calculate the objective performance score. The greatest difference noted was for distance travelled (mean 3976 mm v 720 mm for novices and HPB consultants respectively) and procedure time (318s v 50s for the same two groups). The overall objective performance scores attained by subjects correlated well with their level of experience, and produced significant differences between the three least experienced groups ($p < 0.05$). The mean performance scores were; HPB consultants: 18.9 ($n = 5$), HPB trainees: 17.5 ($n = 5$), general gastroenterology trainees: 13.0 ($n = 7$), novices: 11.1 ($n = 6$).

Conclusion Kinematic analysis of a simulated bile duct cannulation enables the endoscopist's skill to be measured objectively. This method could be used to assist with the training and assessment of this advanced endoscopic procedure.

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Endoscopy I

PTU-015 COMPARATIVE STUDY OF HYBRID TECHNIQUE (HT) VERSUS FLUOROSCOPIC TECHNIQUE (FT) FOR INSERTION OF SELF EXPANDING METALLIC STENTS (SEMS) IN NON TRAVERSABLE OESOPHAGEAL TUMOURS

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Introduction SEMS is an accepted palliation for dysphagia in patients with oesophageal cancer. Endoscopic technique (ET) for SEMS insertion has previously been shown to be safe, effective, less time consuming with improved positioning especially of the proximal end of the stent. The obvious limitation of ET is in non-traversable tumours (with standard endoscope), requiring ultraslim scopes which are not widely available. We employ a hybrid approach, using fluoroscopy for dilatation followed by direct endoscopic insertion of SEMS. Aims: To evaluate the outcomes following HT versus standard FT for oesophageal SEMS placement.

Methods Retrospective case note review of all patients undergoing SEMS placement from Nov 2011 to Oct 2013 was performed. Data was collected on patient demographics, endoscopic and other outcome variables including re-intervention rates and survival. Statistical analyses were performed on GraphPad Prism Version 6 and Epi Info 7.

Results 110 procedures were carried out on 96 patients (28 women, 68 men) with a median age 77.5 years (IQR 69–83.25, Range 52–99). 75 patients had adenocarcinoma, 19 squamous