Abstract PTU-017 Table 1 Outcome measures

Authors	Study	Procedure completed	Intra-operative complications	Procedure duration (min(range))	Specimen size (cm (range))	Survival
Schurr et al.	A&S	20/20(100%)	5/10(50%) & 0/10(0%)	-	Over 3 cm*	
	A	20/20(100%)	3/10(30%) & 0/10(0%)	-	-	
Rajan et al.	S	8/8(100%)	4/8(50%)	30.2	3.6(1.5–5.2)	8/8(100%)
Raju et al.	S	19/20(95%)	0/19(0%)	50(24.5–67)	1.7(1–2.5)	19/20(95%)
Von Renteln et al.	A	9/20(45%) & 8/8(100%)	6/9(67%) & 2/8(25%)	14.8(7–36) & 31.5(21–42)	3.3(2.4–5.5)	
Rieder et al.	A	2/2(100%)	0/2(0%)	33 +/- 4	2.2 +/- 0.1	
Von Renteln et al.	S	8/8(88%)	2/8(25%)	3(2–12)	7.6cm ² (5.4–11 cm ²)	7/8(88%)
Kennedy et al.	A&S	3/3(100%) & 4/4(100%)	0/3(0%) & 0/4(0%)	233(201–245)**	2.5(2–3) & 3.5(3.5–4)	4/4(100%)
Total		101/113(89%)	22/101(22%)			48/50(96%)

Abbreviations: A = acute study, S = survival study; *Reported for 5 animals only, ** Reported for survival group only

complications. The need for an alternative, less invasive treatment option for this patient cohort is becoming increasingly clear.

Methods Systematic literature searches identified articles describing EFTR in the colon of adult pigs, published 1990–2012. Complication rates, anastomotic bursting pressures, procedure duration, specimen size and quality, and post-mortem findings were analysed.

Results Four EFTR techniques using endoscopic stapling devices, T-tags, compression closure or laparoscopic assistance for defect closure before or after specimen resection were reported. 113 procedures were performed in 99 porcine models (Table 1), with an overall success rate of 89% and a 4% mortality. The intraoperative complication rate was 22% (0% > 67%). Post-resection closure methods (as opposed to simultaneous resection and closure) more commonly resulted in failure to close the defect (5% > 55%) and a high incidence of abnormal findings at post-mortem examination (84%). Significant heterogeneity was observed in procedure duration (average 3 min to 233 min) and size of the excised specimen (average 1.7 cm to 3.6 cm). Anastomotic bursting pressures and specimen quality were poorly documented.

Conclusion The technique of EFTR is in development, with experience currently limited to preclinical studies. The inability to close the resection defect reliably is the primary obstacle to further progress. This review highlights the challenges that need to be addressed in future preclinical studies.

Disclosure of Interest None Declared

PTU-018 CAN CHROMOENDOSCOPY HELP IN COELIAC DISEASE AS PART OF A DUODENAL BIOPSY STRATEGY?

doi:10.1136/gutjnl-2013-304907.111

¹A J Johnston, ¹M Kurien, ¹K E Evans, ¹A Averginos, ¹D S Sanders. ¹Department of Gastroenterology, Royal Hallamshire Hospital, Sheffield, UK

Introduction Chromoendoscopy is increasingly being used to detect, localise and characterise mucosal abnormalities, however its role in coeliac disease remains to be established. Endoscopic markers of coeliac disease (reduction of folds, scalloping, mosaic pattern, visible blood vessels and nodularity of the duodenal folds) are often difficult to recognise, therefore many centres take routine duodenal biopsies or have a low threshold for biopsy, ensuring high detection rates. This study evaluates if dye spray can improve identification of endoscopic markers of coeliac disease, potentially leading to a biopsy avoidance strategy.

Methods Patients undergoing clinically indicated oesophago-gastro-duodenoscopy (OGD) were prospectively recruited from a single endoscopy list between January 2011 and November 2012. Patients

were divided into two groups: patients with no previous history of coeliac disease (Group 1, n = 201) and patients with established coeliac disease (Group 2, n = 24). Eight experienced endoscopists undertook all procedures, with endoscopic findings reported both before and after the use of indigo carmine dye spray. Endoscopic findings were compared using a McNemar test, with p values < 0.05 considered significant. In addition, endoscopic findings were compared to histological findings to determine sensitivity, specificity, positive predictive values (PPV) and negative predictive values (NPV) for differing endoscopic techniques.

Results Of the 225 patients recruited, 97 (43%) had positive serology (either endomysial or tissue transglutaminase antibodies). In Group 1, 61(30%) were newly diagnosed coeliac patients with endoscopic markers identified in 44% (27/61). Dye spray use within the duodenum identified a further 5 patients (32/61, 52%), however this improvement in diagnostic yield was not statistically significant (P = 0.63). Sensitivity, specificity, positive and negative predictive values for standard endoscopy to detect coeliac disease were 44%, 99%, 93%, 80% respectively compared to 52%, 99%, 94%, 83% for chromo-endoscopy. In Group 2, 12 patients had persisting Marsh 3 changes at biopsy, however endoscopic markers were identified in only 5 (21%) with dye only increasing yield by a further one patient (6/24, 25%).

Conclusion Dye spray is easy to use and inexpensive (<£1/endoscopy), however in our study derived no additional benefit to conventional endoscopy for diagnosing patients with coeliac disease. Given the low sensitivity of endoscopic markers, we advocate duodenal biopsies in all patients where there is a high clinical suspicion of coeliac disease, irrespective of the endoscopic mucosal findings.

Disclosure of Interest None Declared

PTU-019 A COMPARISON OF TWO COLONOSCOPE WITHDRAWAL TECHNIQUES: INTERIM ANALYSIS OF A RANDOMISED CROSS OVER STUDY

doi:10.1136/gutjnl-2013-304907.112

¹A J Ball, ¹S S Johal, ¹S A Riley. ¹Gastroenterology, Sheffield Teaching Hospitals, Sheffield, UK

Introduction Many endoscopists withdraw the colonoscope with the patient in a single position (left lateral or supine), while others advocate position change. A previous study in a small group of patients suggested position change is beneficial in the transverse and left colon. We have compared colonoscope withdrawal in the supine position with position change.

Methods A randomised cross-over study compared colonoscope withdrawal in the supine position with position change (caecum to