

agreement indicate that “pattern recognition” of HRM/EPT was not adequate and highlighted the value of objective metrics in diagnosis of esophageal dysmotility.

Competing interests M Fox consultant for: given imaging, paid instructor for: Sandhill MMS, J Pandolfino: None declared, J Jafari: None declared, D Menne: None declared.

OC-155 NO WAY BACK—IRREVOCABLE ALTERATION OF THE GASTRIC AND OESOPHAGEAL MICRO-ENVIRONMENT FOLLOWING CHOLECYSTECTOMY

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S N S Gilani,* G Bass, T N Walsh. *RCSI Academic Department of Surgery, Connolly Hospital, Dublin, Ireland*

Introduction Background: Loss of the gallbladder reservoir function at cholecystectomy may critically alter the dynamics of bile storage and release. Consequent iatrogenic duodeno-gastro-esophageal reflux (DGER) may be associated with oesophago-gastric adenocarcinoma.

Aims To examine the histological and molecular effects of cholecystectomy-induced DGER on gastric and oesophageal mucosae.

Methods Patients and Methods: In a retrospective study we compared 26 gallstone-free controls with 25 patients pre-cholecystectomy and 29 patients post-cholecystectomy for one or more years. In a prospective study we compared 26 controls with 25 patients before and within 1 year of cholecystectomy. All underwent oesophago-gastro-duodenoscopy (EGD) with biopsies from the antrum, esophagogastric junction (EGJ) and 5 cm above the EGJ. A histochemical bile reflux index (BRI) was calculated and immunohistochemistry was performed for p53 and Ki67.

Results Results: In the retrospective study antral BRI positivity was 11% in controls vs 69% in cholecystectomy patients ($p=0.001$); at the EGJ BRI positivity was 19% in controls vs 41% in cholecystectomy patients ($p=0.032$). p53 was expressed at the antrum in 4% of controls vs 52% cholecystectomy patients ($p=0.001$) and in 19% vs 66% at the EGJ ($p=0.001$). Ki67 was expressed at the antrum in 23% vs 59% ($p=0.001$) and at the EGJ in 19% vs 62% ($p=0.001$). Prospectively, BRI positivity increased from 11% to 36% ($p=0.04$) at the antrum within 1 year of cholecystectomy. Ki67 expression increased from 19% to 48% ($p=0.044$) at EGJ in patients within 1 year of cholecystectomy while p53 remained unchanged.

Conclusion Changes attributable to DGER occur early in the gastric and LES mucosae of patients following cholecystectomy. Ki67 and p53 over-expression suggests that these changes may be precursors of malignant transformation. Such concerning changes suggest that options other than cholecystectomy be considered for patients with gallstones in a functioning gallbladder.

Competing interests None declared.

DDF symposium: “bowel cancer screening”

OC-156 ANALYSIS OF COLORECTAL POLYPS DETECTED IN THE ENGLISH NHS BOWEL CANCER SCREENING PROGRAMME WITH EMPHASIS ON ADVANCED ADENOMA AND POLYP CANCER DETECTED

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¹D Majumdar,* ²J Patrick, ²C Nickerson, ¹M D Rutter. ¹Department of Gastroenterology, University Hospital of North Tees, Stockton on Tees, UK; ²NHS Cancer Screening Programmes, NHS Cancer Screening Programmes, Sheffield, UK

Introduction Colorectal cancer is the second most common cause of cancer related death in the UK causing around 16000 deaths each year. Colorectal adenomas are slow growing precursor lesions which progress to cancer. The lesion of most interest in this context is advanced adenoma (size 10+ mm/with 20%–25% villous histology/

high grade dysplasia) as they are of higher risk of progression (2). This study analysed adenomatous lesions detected in NHS BCSP programme.

Methods Data on each patient entering the NHS BCSP programme is prospectively recorded on the national BCSP database. The database was interrogated for all polyps/adenomas found during the period September 2006 to September 2011. The data were analysed with particular focus on detection of advanced adenoma and polyp cancers.

Results A total of 65535 polyps were found, of which 43954 (67.06%) were confirmed histologically as adenomas. 15261 advanced adenomas were detected. These accounts for 34.7% of lesions removed and 23.9% of all lesions detected during screening. 842 polyp cancers were found and removed. 1.9% of the adenomatous lesions removed were polyp cancer. The incidence of villous morphology, HGD and polyp cancer, categorised by adenoma size, are shown in the Abstract OC-156 table 1. The presence of villous histology and high grade dysplasia increases with increasing size of adenoma, whereas villous histology begins to plateau for adenomas over 15 mm in size, the incidence of HGD appears linear up to and beyond adenomas of 45mm in size.

Abstract OC-156 Table 1 Advanced histological feature and cancer in different size groups of polyp

Category	Total number of adenoma	Polyp cancers	% Of polyp cancer	HGD	% Of HGD	Villous histology	% Of villous histology
	18533	31	0.16	152	0.8	1035	5.5
5–9 mm	9577	48	0.5	299	3.1	1781	18.6
10–14 mm	5159	193	3.7	609	11.8	2381	46.1
15–19 mm	3055	181	5.9	567	18.5	1904	62.3
20–24 mm	1540	102	6.6	408	26.4	1048	68.0
25–29 mm	683	70	10.2	211	30.9	511	74.8
30–34 mm	401	48	11.9	139	34.6	299	74.5
35–39 mm	115	21	20	42	36.5	93	80.8
40–44 mm	138	20	14.4	54	39.5	106	76.9

Conclusion 67.06% of all lesions found were histologically confirmed colorectal adenomas. One third of adenomas were advanced adenomas. There is a trend of increase of incidence of cancer and features of advanced neoplasia in adenomas with increasing size. The incidence of AA feature present in lesions below 10mm in size was 10.07%.

Competing interests None declared.

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BSG symposium: “stem cells”

OC-157 PHYSIOLOGICAL CHANGES IN MATRIX STIFFNESS MODULATE HEPATIC PROGENITOR CELL MORPHOLOGY, PROLIFERATION AND DIFFERENTIATION

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¹T T Gordon-Walker,* ²J Schrader, ¹L Boulter, ¹A J Robson, ¹S J Forbes, ^{3,4}R G Wells, ¹J P Iredale. ¹MRC Centre for Inflammation Research, Queen's Medical Research Institute, Edinburgh, UK; ²Department of Medicine I, University Medical Center Hamburg-Eppendorf, Hamburg, Germany; ³Department of Medicine, School of Medicine, University of Pennsylvania, Philadelphia, USA; ⁴Department of Gastroenterology, School of Medicine, University of Pennsylvania, Philadelphia, USA

Introduction Liver injury is associated with changes in the biochemical and physical properties of the extracellular matrix