

Methods Retrospective analysis of a prospectively maintained database of all patients presenting with ABAP in whom a S-MRCP was requested from June 2008 to May 2013. The findings of S-MRCP were compared with those of MRCP and EUS (performed prior to S-MRCP) and the diagnostic yield of S-MRCP in the work up of a patient presenting with ABAP was estimated.

Results Of the 117 patients with ABAP [28 males and 89 female; mean age 48 yrs] were referred for S-MRCP, 114 (97.4%) patients successfully completed the scan. Of these 37 patients who had a normal MRCP, S-MRCP identified significant findings in 8 (22%) patients (Table 1). In the present study 78 (67%) patients had EUS. Out of the 41 patients who had a normal EUS, S-MRCP was able to identify significant pathology in 21 (54%) patients (Table 1).

Conclusion This study suggests that S-MRCP has a 22 and 54% additional diagnostic yield in ABAP patients who have a normal MRCP and a normal EUS respectively. The commonest abnormality identified in these patients on S-MRCP was obstruction at ampulla or proximal PD. S-MRCP should be considered in the diagnostic algorithm of patients with ABAP.

REFERENCES

- 1 Mariani A, Arcidiacono PG, Curioni S, *et al.* Diagnostic yield of ERCP and secretin-enhanced MRCP and EUS in patients with acute recurrent pancreatitis of unknown aetiology. *Dig Liver Dis* 2009 Oct;41(10):753-8
- 2 Matos C, Metens T, Devière J, *et al.* Pancreas divisum: evaluation with secretin-enhanced magnetic resonance cholangiopancreatography. *Gastrointest Endosc* 2001 Jun;53(7):728-33

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PTH-105 HOW OMINOUS IS THE "DOUBLE-DUCT" SIGN ? : A SINGLE CENTRE EXPERIENCE

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Introduction "Double-duct" sign on ERCP (Endoscopic retrograde cholangio-pancreatogram) is considered suggestive of pancreatic or biliary malignancy. This sign is frequently encountered in radiological imaging. We wish to investigate the prognostic value of the "double-duct" sign in patients who undergo Magnetic resonance cholangio-pancreatography (MRCP), attempting to define the associated features which would predict underlying malignant disease.^{1,2}

Methods A retrospective analysis of all the patients who underwent MRCP over a two year period; January 2011 to December 2012 was undertaken. All the radiological reports showing both a dilated common bile duct (CBD) and pancreatic duct (PD) or the "double-duct" sign were included. These were all interpreted and reported by specialist gastrointestinal radiologists. The demographics, liver biochemistry, final diagnosis and outcome for all patients with the "double-duct" sign were accessed using the radiology PACS® system, biochemical results WebICE®, hospital letters and case notes. Follow up information was available for a mean of 24months (range 12–36 months).

Results 1,367 patients underwent MRCP examination over two year period. 46 patients (3.5% incidence) had "double-duct" sign (Table 1.) with a mean age of 69.5 years. The ratio of male to female patients was (M:F) 12:11. The commonest cause of "double-duct" sign was choledocholithiasis (29.4%) followed by

Abstract PTH-105 Table 1 Patients with double-duct signs

Table: 1 Patients with double-duct signs	(n)	%
Malignancy	12	26
Ca-HOP (Carcinoma head-of-pancreas)	9	75.0
Cholangio-carcinoma	1	8.3
Metastatic external compression	1	8.3
IPMN (Intra-ductal papillary mucinous neoplasm)	1	8.3
Benign	34	74
Distal/peri or ampullary choledo-cholelithiasis	10	29.4
Chronic pancreatitis ± PD stricture and/or calculi	7	20.5
Pancreatic cyst ± PD stricture	5	14.7
Common channel fibrotic stricture	3	8.8
Benign biliary stricture with pancreas divisum	3	8.8
Benign ampullary lesion	2	5.9
Idiopathic (NO cause identified)	2	5.9
IPMN	2	5.9

malignancy (26%). Patients with jaundice in the context of "double-duct" sign had a higher incidence of malignancy (48%). Nearly half of the patients, (21/46; 46%) with "double-duct" sign were anicteric. None of the anicteric patients were found to have malignancy. Of the anicteric patients, 29% (6/21) had completely normal liver test and the remaining 71% (15/21) had some abnormality of the liver enzymes (raised GGT and/or Alkaline phosphatase). Three patients in the anicteric group had benign tumours (2 cases of benign IPMN and 1 case of benign ampullary tumour). The benign nature was confirmed on clinical and radiological follow-up. No surgical intervention was deemed appropriate for any of these patients. All three remained anicteric over the period of follow-up (13 months; unrelated death, 18 and 36 months respectively). Our results show that "double duct" sign in the absence of jaundice makes a malignant aetiology unlikely.

Conclusion In patients with cross-sectional imaging evidence of "double-duct" sign, the absence of jaundice makes a malignant aetiology unlikely. Conversely, in jaundiced patients a malignant cause is much more likely. Figures from larger series are needed to support this conclusion.

REFERENCES

- 1 Baillie J, *et al.* Biliary imaging: a review. *Gastroenterology* 2003; 125 (5):1565
- 2 Ahualli J. The double duct sign. *Radiology* 2007;244 (1):314–5

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Small bowel and nutrition

PTH-106 BILE ACID DIARRHOEA MASQUERADES AS DIARRHOEA-PREDOMINANT IRRITABLE BOWEL SYNDROME: RESULTS FROM A DUAL CENTRE PROSPECTIVE STUDY

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Introduction Several studies have suggested that bile acid diarrhoea (BAD) can present with symptoms that are compatible with diarrhoea-predominant irritable bowel syndrome (IBS-D). However, uncertainty exists as these have often been

retrospective, have not defined IBS-D according to accepted diagnostic criteria, or have included patients with chronic diarrhoea in the analysis. We have examined this issue in a well-characterised cohort of patients with rigorously defined IBS-D.

Methods This was a prospective cross-sectional survey conducted among consecutive patients with IBS-D attending Gastroenterology clinics in two hospitals in Sheffield and Leeds, UK. All patients underwent 23-seleno-25-homo-tauro-cholic acid (SeHCAT) scanning according to local protocol, with a retention of <15% at day 7 used to confirm BAD. The degree of BAD was classed as severe if retention < 5%, moderate if 5.0 >9.9%, and mild if 10.0 >14.9%. Presence of IBS-D was defined according to the Rome III criteria. Patients with other known risk factors for BAD, including previous cholecystectomy, terminal ileal Crohn's disease, terminal ileal resection, pelvic or abdominal radiotherapy, coeliac disease, or microscopic colitis, were excluded. Participants completed the patient health questionnaire-15, a validated somatisation score, and the hospital anxiety and depression score. Demographic data, including age, gender, lifestyle, and body mass index (BMI) were collected. The effect of all these factors on presence or absence of BAD was examined by multivariate logistic regression analysis, with results expressed as odds ratios (ORs) with 99% confidence intervals.

Results This is an interim analysis of an ongoing study. In total, 51 patients with IBS-D according to the Rome III criteria have been recruited to date (37 (72.5%) female, mean age 47.0 years). In total, 14 (27.5%) were found to have BAD following SeHCAT scanning. Of these, nine (17.6%) had severe BAD, four moderate, and one mild. Mean age, BMI, anxiety, depression, and somatisation scores were not significantly different among those with, compared with those without, BAD. No predictors of presence of BAD were identified following multivariate logistic regression.

Conclusion Our data suggest that more than one-in-four IBS-D patients, if investigated, have definite evidence of BAD. In the majority, this is severe. Failure to investigate patients to exclude BAD as an underlying cause of symptoms compatible with IBS-D results in misdiagnosis and a failure to institute effective therapy, in the form of bile acid sequestrants. This suggests that future IBS management guidelines should advocate diagnostic testing to exclude BAD before a diagnosis of IBS-D is made.

Disclosure of Interest None Declared.

PTH-107 A PRELIMINARY STUDY OF THE EFFECTS OF OBETICHOIC ACID, A FARNESOID X RECEPTOR AGONIST, IN PATIENTS WITH CHRONIC DIARRHOEA SECONDARY TO CROHN'S ILEAL DISEASE

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Introduction Chronic diarrhoea occurs frequently as a result of excess faecal bile acid (BA) loss. Secondary bile acid diarrhoea (SBAD) is common in Crohn's disease with ileal inflammation and/or resection. The normal ileum produces Fibroblast Growth Factor 19 (FGF19) in response to BA absorption and farnesoid X receptor (FXR) activation. FGF19 acts as a hormonal regulator of hepatic BA synthesis. We showed previously in 10 patients with primary bile acid diarrhoea, diagnosed by 7d SeHCAT retention <10%, that the semi-synthetic BA and potent FXR agonist obeticholic acid (OCA) significantly increased low

FGF19 levels producing significant clinical improvement. We aimed to see if these findings could be extended to patients with SBAD due to Crohn's and in idiopathic diarrhoea controls.

Methods Out of 32 patients recruited to this pilot trial, 8 SBAD patients (6F:2M, median age 45, ileal resection 0–48 cm, median 22.5 cm, and/or SeHCAT <11%), and 7 controls (2F:5M, SeHCAT 16–35%, median 25%) received OCA 25 mg daily for 2w after a 2w run-in period. BA sequestrants were discontinued. Symptoms were recorded and a stool index calculated from frequency, stool form and loperamide use. On the first and last days of OCA therapy, blood samples were assayed for FGF19, total BA levels and the BA precursor, 7 α OH-4-cholesten-3-one (C4) in fasting and for 6h after OCA and meals.

Results In the SBAD group, 7 out of 8 patients showed positive but variable changes in stool form and stool index (both $p = 0.07$, Wilcoxon). Pain frequency ($p = 0.05$) and severity ($p = 0.07$) improved. Ileal resection length was related to the change in stool number ($r = 0.78$, $p = 0.01$, Spearman), index ($r = 0.63$, $p = 0.05$) and urgency ($r = 0.68$, $p = 0.03$) so that those with the smallest resections had the greatest improvements. Increases in FGF19 fasting and post-prandial levels were relatively small except in 2 patients, but were associated with improvements in urgency ($r=0.93$, $p < 0.01$). The reductions in post-prandial BA response ($p = 0.01$), fasting and peak BA values were significantly greater in those with shorter resections. C4 was related inversely to FGF19 and positively to the resection length. By contrast in the diarrhoea controls, there were no significant changes in clinical symptoms or FGF19. However BA responses were lower ($p = 0.03$) and significant relationships between FGF19 and BA responses were found.

Conclusion This pilot study has shown that OCA produces clinical benefit in many patients with chronic diarrhoea including those with SBAD, particularly with short resections, but not in idiopathic controls. Further trials are warranted.

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PTH-108 SEHCAT: NICE OR NOT NICE?

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Introduction Bile acid malabsorption (BAM) is increasingly recognised as the underlying diagnosis in many patients with D-IBS and Crohn's disease, and SeHCAT testing has greatly increased. The 2012 NICE consultation document¹ acknowledges lack of evidence of cost effectiveness and advocates trial of treatment with bile acid sequestrants (BAS) rather than SeHCAT for Crohn's patients, but often these are poorly tolerated and the response equivocal. We review our experience of SeHCAT testing and review it with respect to NICE.

Methods Retrospective review of 121 consecutive patients who had SeHCAT performed between April 2009 and December 2012. Patient demographics, associated diseases (Crohn's disease, right hemicolectomy, radiotherapy, HIV, microscopic colitis, coeliac disease, vagotomy and pyloroplasty, Graves disease, intestinal

Abstract PTH-108 Table 1

	Sensitivity	Specificity	PPV	NPV
Crohn's	0.75	0.60	0.90	0.32
Right hemicolectomy	0.88	0.59	0.97	0.26