median duration of LAMS placement was 44 days. No procedural or delayed LAMS related complications occurred.

Conclusion Appropriate pre-procedural cross-sectional imaging facilitates identification and treatment of underlying pseudoaneurysm in this complex patient group. Post procedure interval imaging enables quantification of the residual collection to determine the benefit of long term plastic stents or additional drainage procedure. Our experience suggests adherence to a rigorous imaging protocol may reduce the risk of complication associated with LAMS deployment.

Small bowel

OTH-5 FUNCTIONAL GASTROINTESTINAL DISORDERS AND ASSOCIATED HEALTH IMPAIRMENT IN INDIVIDUALS WITH COELIAC DISEASE

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Introduction Individuals with coeliac disease (CD) can experience persisting gastrointestinal symptoms despite adhering to a gluten-free diet (GFD). This may be due to functional gastrointestinal disorders (FGIDs), although there is little data on its prevalence and associated factors.

Methods An online health questionnaire was completed by adult members of Coeliac UK in October 2018. The survey included validated questions on Rome IV FGIDs, non-gastrointestinal somatic symptoms, anxiety, depression, quality of life, healthcare use, GFD duration and its adherence using the coeliac dietary adherence test score (with a value ≤ 13 indicating optimal adherence). The prevalence of FGIDs and associated health impairment in the coeliac cohort was compared against an age- and sex- matched population-based control group.

Results Of the 863 individuals with CD (73% female, mean age 61 years) all were taking a GFD for at least 1 year, with 96% declaring that they have been on the diet for over 2 years. The adherence to a GFD was deemed optimal in 61% (n=523) with the remaining 39% (n=340) non-adherent. Those adhering to a GFD fulfilled criteria for a FGID in approximately a half of cases, although this was significantly lower than non-adherent subjects (51% vs. 75%, OR 2.0; $p<0.001$). However, the prevalence of FGIDs in GFD-adherent subjects was significantly higher than in matched population-based controls (35%, OR 2.0; $p<0.001$). This was accounted for by functional bowel (46% vs. 31%, OR 1.9; $P<0.0001$) and anorectal disorders (14.5% vs. 9.3%, OR 1.7; $p=0.02$) but not functional esophageal (7.6% vs. 6.1%, $p=0.36$) or gastroduodenal disorders (8.7% vs. 7.4%, $p=0.47$). Finally, GFD-adherent subjects with FGIDs were significantly more likely, than their counterparts without FGIDs, to have abnormal levels of anxiety (5% vs. 2%, OR 2.8; $p=0.04$), depression (7% vs. 2%, OR 3.6; $p=0.01$), somatisation (31% vs. 8%, OR 5.1;

$p<0.0001$), increased healthcare use and reduced quality of life ($P<0.0001$).

Conclusion One-in-two people with CD, despite having been on a GFD for a number of years and demonstrating optimal adherence, have ongoing symptoms compatible with a Rome IV FGID. This is two-fold the odds of FGIDs seen in age- and sex- matched controls. The presence of FGIDs is associated with significant health impairment, including psychological co-morbidity. Addressing disorders of gut-brain interaction might improve outcomes in this specific group of patients.

OTH-6 REFRACTORY COELIAC DISEASE: PITFALLS OF T-CELL RECEPTOR CLONALITY AND INTRA-EPITHELIAL LYMPHOCYTE IMMUNOPHENOTYPING

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Introduction Persistent villous atrophy (VA) occurs in up to 66% (Lebwohl et al 2013) following a diagnosis of coeliac disease (CD) despite a gluten free diet. Refractory coeliac disease (RCD) affects 0.3-4% of all patients with CD (Baggus et al 2019) and manifests persistent or recurrent classic malabsorptive symptoms of weight loss and diarrhoea. RCD is sub-classified by intra-epithelial lymphocyte (IEL) immunophenotyping and T-cell receptor (TCR) clonality into RCD1 and RCD2. RCD2 carries a high rate of progression to enteropathy-associated T-cell lymphoma (EATL) and roughly 50% 5-year mortality (Baggus et al 2019). However, the prognostic value of IEL immunophenotype and TCR clonality in patients not meeting strict clinical criteria for RCD is unclear.

Methods 17 consecutive patients referred for RCD assessment at King's College Hospital (KCH) were seen between September 2016 and November 2020. Retrospective data from 1998 to November 2020 were collected from patient records at KCH and referring hospitals, including demographics, blood tests, biopsies, IEL immunophenotyping and TCR clonality, diagnosis and clinical course.

Results Of 17 patients followed up for 104 patient years, 16 had persistent VA of which only 7 (44%) had malabsorptive

Abstract OTH-6 Table 1 Prevalence of abnormal IEL immunophenotype and TCR monoclonality at any point in follow-up period by diagnosis of all specimens in which TCR monoclonality was detected (n=38), 32% (n=12) had normal IEL counts. When tested, 92% (n=11) of specimens with normal IEL counts demonstrated TCR monoclonality

Abnormal IEL immunophenotype prevalence

Total	7 (42%)
NR	5 (56%)
RCD	1 (17%)
EATL	1 (100%)
Non-CD immune enteropathy	0
TCR monoclonality prevalence	
Total	12 (71%)
NR	7 (78%)
RCD	3 (50%)
EATL	1 (100%)
Non-CD immune enteropathy	1 (100%)

symptoms. We diagnosed 5 as RCD1 (29%), 1 RCD2 (6%), 1 EATL at presentation, 1 non-CD immune enteropathy, and 9 non-refractory (NR) (53%).

9 patients had a prior RCD2 diagnosis based on TCR monoclonality (n=9) and abnormal IEL immunophenotyping (n=6). We reclassified 2 as RCD1 due to unconvincing symptoms when these parameters were abnormal, but subsequent convincing symptoms with resolution of these parameters. 6 cases were reclassified as NR due to unconvincing symptoms.

During 36 patient years of follow-up after abnormal IEL immunophenotyping and 57 patient years following TCR monoclonality detection there was no progression to EATL and no deaths.

Conclusions Abnormal immunophenotype and TCR monoclonality did not confer a high risk of mortality or progression to EATL in patients with non-malabsorptive presentations of persistent VA. TCR monoclonality can also be found in specimens with normal IEL counts. We therefore recommend that these tests are reserved for patients meeting strict RCD criteria, including classic malabsorption, to avoid unnecessary treatment and anxiety.

Nutrition

OTH-10 LIPID MONITORING AND HYPERLIPIDAEMIA IN PATIENTS ON HOME PARENTERAL NUTRITION

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Introduction Home Parenteral Nutrition (HPN) is integral to the management of patients with intestinal failure (IF). HPN carries risks; one is hyperlipidaemia, including hypertriglyceridaemia¹, however the frequency of this is unclear. Current guidelines vary in monitoring recommendations. BAPEN guidelines (2020) recommend weekly lipid measurement initially, and quarterly once lipid levels and HPN prescription are stable, ESPEN guidelines (2020) do not suggest frequency.

We aimed to audit the frequency of hyperlipidaemia in patients receiving HPN in the north of England.

Methods Using a hospital-based electronic system and regional HPN database, we reviewed a cohort of 162 patients who commenced HPN after the first of January 2015. Patients were included if they had received PN, rather than solely fluid and electrolytes, for at least 3 months.

Results 19 out of 162 patients were taking lipid-modifying therapy; of these, 13 had commenced on it prior to PN (Table 1). In all cases, these were statins. Of the 6 patients who commenced on statins post-PN, none of them met criteria for intervention by lipid levels, as set out by NICE (National Institute for Health and Care Excellence (2020)).

Conclusions There was little consistency in when and how often lipids were measured. There was also very little change in lipid levels with establishment on PN. Our results suggest that lipid derangement caused by HPN is uncommon; indicating that monitoring as recommended by BAPEN may be unnecessarily frequent.

REFERENCE

1. Btaiche I, Khalidi N. Metabolic Complications of parenteral nutrition in adults, part 1. *Am. J. Health-Syst Pharm.* 2004;**61**:1938–49.

Abstract OTH-10 Table 1 Patient demographics, details of lipid monitoring and measured serum lipid values

Demographics (N=162)

Sex

Male 38.9%

Female 61.1%

Age (years)

Median (range) 57.5 (16-85)

Initial Lipids Measured

Yes- <30 days post-PN 69 (42.6%)

Yes- >30 days post-PN 54 (33.3%)

No 39 (24.1%)

IF Severity (ESPEN Classification)

A1-4 4.1%

B1-4 17.2%

C1-4 17.2%

D1-4 61.5%

HPN Duration (days)

Median (range) 496 (44-2002)

Lipid-modifying therapy

Yes (pre-PN) 13

Yes (post-PN) 6

No 143

Number of post-PN lipid tests.

Mean (range) 3.44 (0-11)

Results (all mmol/L)

	Mean Initial Measurement	Mean subsequent measurement (>30 days after commencing PN)	Mean change
Total Cholesterol (<5.0 mmol/L)	3.76	3.64	-0.27
HDL (>1.0 mmol/L)	1.15	1.19	0.05
Non-HDL (<4.0 mmol/L)	2.61	2.45	-0.10
Triglycerides (<2.3 mmol/L)	1.50	1.58	0.08

OTH-11 BILIARY COMPLICATIONS ON HOME PARENTERAL NUTRITION: EXPERIENCE OF A REGIONAL REFERRAL CENTRE FOR INTESTINAL FAILURE

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Background Parenteral nutrition is associated with gastrointestinal complications but the prevalence and risk factors for this are not entirely clear. The aim of this study was to assess the frequency of pancreaticobiliary (PB) conditions and their risk factors in a cohort of patients receiving home parenteral nutrition (HPN).

Methodology All patients receiving HPN via our regional referral centre for intestinal failure are entered into a prospectively maintained database. All patients who received HPN from 1st August 2010 to 1st August 2020 were included. Data included patient demographics, comorbidities, reason for HPN, ESPEN classification, duration of HPN, cross sectional