

PWE-033

## TERMINAL ILEAL BIOPSY, SMALL BOWEL IMAGING AND UPPER-GI ENDOSCOPY ARE ALL REQUIRED FOR THE EFFICIENT DIAGNOSIS OF PAEDIATRIC-ONSET CROHN'S DISEASE

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**Introduction** In contrast to adult-onset Crohn's disease (CD), presentation of paediatric-onset CD (PCD) is characterised by widespread intestinal involvement; hence guidelines for diagnosis of PCD recommend evaluation of the GI tract by upper-gastrointestinal endoscopy (UGIE), colonoscopy with terminal ileal (TI) biopsy and small-bowel imaging (SBI). We aimed to establish the contribution of each part of this evaluation to the diagnosis of PCD.

**Methods** We performed a retrospective cohort study of all 159 PCD cases (diagnosis <17 years of age) in our regional centre from 1 July 1997 to 1 September 2009 using case note and database review. 109 PCD patients had full endoscopic examination at first presentation including attempted TI biopsy, UGIE and SBI (barium follow-through or MRI). Location of PCD defining granulomatous or characteristic inflammation was recorded, in contrast to non-specific classical features of IBD (diagnostic for IBD not PCD). Statistical analysis was performed using Fisher's Exact test.

**Results** Data were available for 105/109 (96%) patients with PCD undergoing full GI tract evaluation at initial diagnosis. 58 (55%) patients had upper GI involvement. TI biopsy was achieved on 66 (63%) occasions. Histopathological defining features of PCD in the TI alone were present in 7 (11%) cases. PCD was diagnosed by SBI alone, where biopsies were non-diagnostic, in 10 (10%) cases, including 3 (5%) of 66 cases where TI biopsy was achieved. Defining features of PCD were seen in UGIE alone in 8 (8%); 7/8 cases included TI biopsy that was not diagnostic. Two patients had non-specific GI inflammation but granulomatous inflammation involving the skin. Sensitivity of colonoscopy alone (without TI biopsy) was 74% for PCD. Sensitivity of colonoscopy and TI biopsy alone (where TI intubation was achieved) was 83% ( $p=0.2$ ). The addition of TI biopsy and/or SBI to colonoscopy improved sensitivity to 90% ( $p=0.003$ ) and sensitivity again significantly improved to 98% ( $p=0.03$ ) when UGIE was added.

**Conclusion** Differentiation of PCD from ulcerative colitis and IBDU requires correlation of clinical, endoscopic, pathological and radiological findings. Our data support the recommendation by BSPGHAN<sup>1</sup> that children suspected of IBD should have complete evaluation of the GI tract at diagnosis. Many children undergo endoscopic evaluation by adult gastroenterologists, more accustomed to the adult distribution of disease, and who may be tempted to forgo full ileocolonoscopy and UGIE. Our data demonstrate that these tests are vital to significantly improve diagnostic yield in PCD.

**Competing interests** None.

**Keywords** Crohn's disease, paediatric.

### REFERENCE

1. Guidelines for the management of IBD in children in the UK. *JPGN* 2010;50:S1–13.