

Small Bowel Ultrasound in Crohn's Disease - Outcomes in a District General Hospital

R. Perry, C. S. Chey, H. Htet, F. Chilcott, P. Bhand, B. Kirkham, G. Bhatnagar, S. Langlands, J. Wu

Department of Gastroenterology, Frimley Park Hospital, Camberley, United Kingdom.

Introduction

The joint ECCO and ESGAR evidence-based consensus guidelines for imaging techniques for inflammatory bowel disease (IBD) assessment recommends ultrasound (US) as one of the first-line tests for the investigation of Crohn's Disease (CD). It is inexpensive, free of ionising-radiation and well tolerated. We looked at outcomes in small bowel (SB) US in our CD population.

Methods

Retrospective analysis of SB US for patients with known or suspected CD between June 2016 to February 2017 in Frimley Park Hospital. Data was collected from PACS, clinic letters and endoscopy reports.



Figure 1: US performed for assessment of symptomatic flare in established CD patients (23% of scans overall).

Results

91 US scans in a total of 83 patients were performed by a single, dedicated GI radiologist (6 patients had more than one US). Patient age range 7-80 years (median 29 years); 53 female (64%), 30 male (36%).

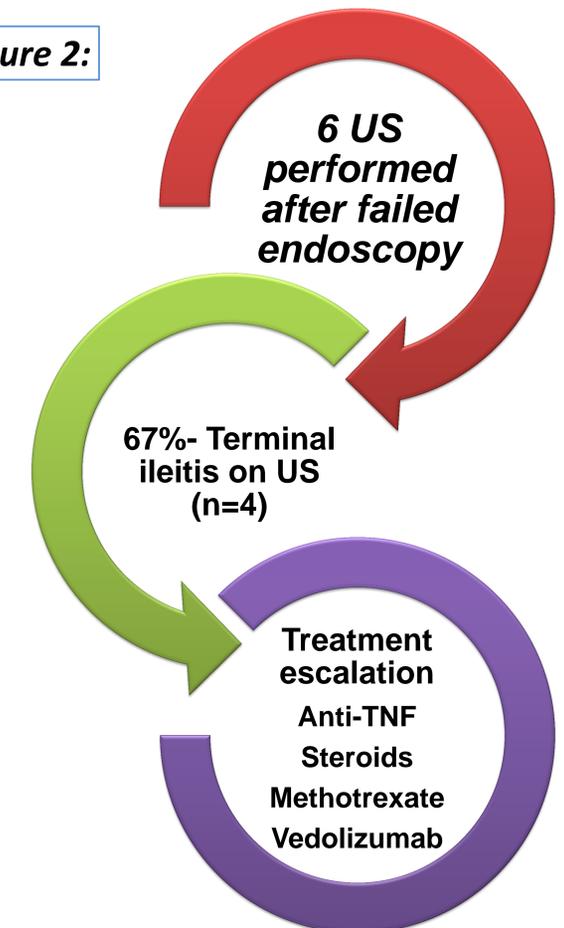
21/91 (23%) US were performed for assessment of symptomatic flare in those with established CD. 16/21 (76%) had active disease on US (81% terminal ileitis; 6.3% stricture, 6.3% fistula, 6.3% abscess). Of these, 4 had MRE and 2 had colonoscopy which correlated with US findings. 11/16 (69%) had treatment escalation following US (55% started anti-TNF, 18% steroids, 9% Vedolizumab, 9% enteral, 9% surgery). US was the sole investigation prior to treatment escalation in 7 of these patients (64%). (Figure 1)

24/91 (26%) US were performed in established CD patients to aid treatment decisions; 4 after recent steroid course (all started disease modifying treatment), 8 to assess patients on biologics, 2 to evaluate starting biologics, 6 to evaluate previous abnormal/inconclusive CT/MRI or colonoscopy, 2 peri-procedurally, 1 for discordant symptoms and imaging; 1 for abnormal biochemistry.

6 US were undertaken after failure of terminal ileum intubation for established CD. 4/6 (67%) detected terminal ileitis and treatment subsequently escalated (1 started methotrexate, 1 anti-TNF, 1 Vedolizumab, 1 prednisolone). (Figure 2)

46/91 (51%) US were performed for suspected CD. 11/46 (24%) showed active inflammation. 8 were ultimately diagnosed with CD. In this group, 2 had MRE, 3 had colonoscopy and 3 had both, all correlating with US findings. 35/46 (76%) did not show active inflammation but reported incidental findings including malignancy and gallstones.

Figure 2:



Conclusion

This study demonstrates the useful role of SB US in the management of CD. Our results show that US led to changes in treatment including management of acute flares, alterations in medical therapy and assessing response to treatment in our Crohn's cohort.

We recommend that SB US should be more widely utilised in such patients as it correlates well with the gold standard investigations and is able to provide complementary information to aid decision-making.