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Introduction In the last years ultrasonography (US) has become an accepted tool in the diagnosis of Crohn's disease and in the detection of complications. Despite several attempts to correlate ultrasound findings with clinical and biochemical activity, there are as yet no convincing data on the usefulness of US in assessing the activity of CD. The authors studied the role of US in diagnosis, complications detection and disease activity of known small bowel CD comparing the results with MRI.

Methods In this prospective study the authors compared US with MRI small bowel in a series of patients with known Crohn's disease who were referred to our centre. US and MRI were performed respectively by one Gastroenterologist experienced on US and a Radiologist dedicated to magnetic resonance enterography who were carried out blindly. All the patients first had an US performed and reported, followed within 7 days by MRI scan. For the purpose of the analysis the authors evaluated the presence of terminal ileitis, small bowel stenosis, fistula, abscess and assessment of disease activity. The latter was matched with lab and clinical parameters.

Results A total of 46 patients with known CD were identified for this study (aged 16–79 years; mean 40; 33 male). All the patients had an ileo-colonoscopy and a conventional enteroclysis in the prior 2 months positive for Crohn's ileitis. Isolated ileal disease was present in 60% and ileo-colonic disease in the remaining 40%. The results of US compared with the subsequent MR scans showed in diagnosis of terminal ileitis a specificity (Sp) and sensitivity (Sn) respectively of 100% and 96% with a Positive Predictive Value (PPV) of 100% and Negative Predictive Value (NPV) of 87.5%. Also in stenosis detection, US showed Sp 94.4% and Sn 93.3% with PPV and NPV respectively of 93.3% and NPV 94.4%. Good results was also found in detection of complications: for fistula the Sp was 100% and Sn of 85% with a PPV of 100% and NPV of 96% while for abscess Sp was always 100% with a Sn of 25% and PPV and NPV respectively of 100% and 90%. Lower performance of US where found in the assessment of disease activity: Sp of 100% and Sn of 63% with a PPV of 100% but a NPV of 42%.

Conclusion The results of this study confirm the usefulness of US in CD. The technique is sensitive to localise the affected bowel segments. On the other hand, as previous confirmed from other studies, the sensitivity and the NPV of US in detecting disease activity was low. In this series some limitations in detecting some extraintestinal complications as abscess was also found.

Competing interests None.

Keywords inflammatory bowel disease, MRI, ultrasound.

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USEFULNESS OF ULTRASOUND IN SMALL BOWEL CROHN'S DISEASE: COMPARISON WITH MAGNETIC RESONANCE FOR EXTENSION, COMPLICATIONS AND DISEASE ACTIVITY

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