

Intestinal ultrasound in assessment of suspected Crohn's disease in patients with negative ileocolonoscopy: a paradigm shift?

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Received: 2 May 2018; revised manuscript accepted: 12 June 2018.

Dear Editor,

We read with great interest the article 'The accuracy of intestinal ultrasound compared with small bowel capsule endoscopy in assessment of suspected Crohn's disease in patients with negative ileocolonoscopy' by Carter and colleagues published in a recent issue of *Therapeutic Advances in Gastroenterology*. This is a noteworthy study given the rise in incidence and growing public-health concerns of Crohn's disease (CD), which has led to much research, especially in the area of diagnosis.¹ CD is a very debilitating illness that can severely affect the quality of life and productivity of affected individuals. Therefore, a timely diagnosis, which could lead to earlier management, improved quality of life, and workplace productivity is of high importance.

In North America, computed tomography (CT) enterography and magnetic resonance enterography (MRE) are two imaging modalities increasingly being used in the diagnosis of small bowel CD, especially in patients with normal ileocolonoscopy.² Though CT enterography has a better image quality and minimal intra-observer variability compared with MRE, they both have similar diagnostic accuracy (sensitivity of about 95%), and the ability to simultaneously assess mural and extramural CD manifestations.³

However, the use of CT enterography and MRE for the diagnosis of small bowel CD is limited by cost and availability. In addition, CT enterography is particularly associated with exposure to ionizing radiation. The relapsing nature of CD often leads to patients undergoing multiple abdominal CT imaging in their lifetime, increasing cumulative exposure to radiation. Thus, the

use of intestinal ultrasound (IUS), as described in the paper by Carter and colleagues, is very appealing given its low cost and decreased exposure to ionizing radiation.

Abdominal ultrasound is widely used in clinical practice, both in resource-rich and resource-limited settings. The relapsing potential of CD makes IUS a potentially good imaging alternative to abdominal CT. Some studies have reported IUS to have similar diagnostic accuracies to CT enterography and MRE,⁴ further giving credence to the fact that IUS may be a useful diagnostic tool in suspected cases of CD where ileocolonoscopy is negative as suggested by the authors.

A limitation of the current paper may be the non-use of oral contrast in their imaging technique. One study reported improved diagnostic accuracy of IUS with the addition of oral contrast compared with standard IUS.⁵ A reasonable next step in this area of research would be to compare the diagnostic accuracies of standard IUS, oral contrast-enhanced IUS, CT enterography, and MRE in the diagnosis of CD affecting the small bowel and Crohn's flares. Contrast-enhanced IUS may prove comparable to CT enterography and MRE in, not only diagnosis, but also in assessing the extent of disease, thus arguing in favor of its use in clinical practice.

Funding

This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

Conflict of interest statement

The authors declare no conflicts of interest in preparing this article.

Ther Adv Gastroenterol

2018, Vol. 11: 1–2

DOI: 10.1177/
1756284818787397

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