Dr John Chetwood

BSc (Hons) MBBS (dist)
DTM&H (dist) FRACP
Gastroenterology, Endoscopy, Hepatology

Appointments available. Please contact:

Suite 229, 1 Katherine Street,
Chatswood NSW 2067

P 02 8964 8619
F 02 8964 8664
E Contact via e-mail here
W chatswoodendoscopy.com.au

Northern Beaches Hospital
Frenchs Forest Road (West),
Frenchs Forest NSW 2086 **P** 02 9105 5000
northernbeacheshospital.com.au

Diagnosis and assessment of small and large bowel inflammation

By Dr John Chetwood – Gastroenterologist

How do you assess functional symptoms versus inflammation and structural issues?

Gut symptoms are a common complaint in general practice, and it can be tricky to differentiate the patient who has inflammatory bowel disease or other pathologies, versus functional symptoms and irritable bowel syndrome.

On the one hand, an inflammatory bowel diagnosis is often delayed by up to 2 years, but many patients may not want or be appropriate for such investigations as colonoscopy. It is often difficult to do these assessments serially.

Symptoms are useful – bloating, the passing of mucus, and chronic symptoms in a young patient are reassuring, whereas weight loss, gastrointestinal bleeding, trouble swallowing, severe pain, an acute history of symptoms, or a strong family of bowel cancer or IBD are also a cause for concern. However, symptoms correlate imperfectly with pathologies, and objective assessments are often needed.

Biochemical investigations are generally needed. However, females who are menstruating, particularly if heavily, may also have other reasons for iron deficiency – and the lack of this does not rule out luminal pathology. A faecal calprotectin is useful to assess for inflammation, but there are other reasons for it to be raised (such as bleeding), there is a spectrum of 'normal' in the general population, and the sensitivity is lower in small bowel disease. Occasionally there may be a lab or processing issue which gives a falsely normal result even in active inflammation.
Bowel cancer screening tests (FOBT), while reassuring while negative, are not particularly discriminatory in a diagnostic setting – and can be normal even in advanced polyps and bowel cancers.

Other options include Magnetic Resonance Imaging scans (enterorrhaphy) – but without a Crohn's disease diagnosis – it is expensive and not MBS rebatable, takes a long time to complete (often around 45 minutes, during which time the patient must be completely still) and requires the patient to drink a large volume of oral contrast, which can be poorly tolerated. Elderly patients who have trouble lying flat, may often struggle to complete the scan.

A newer and exciting technique is **intestinal ultrasound**.

This is performed by a trained gastroenterologist (not a radiologist nor radiographer), requires no preparation or oral contrast, can be done point of care and serially with ease, and has equal accuracy to MRI.

How do you use intestinal ultrasound (IUS)?

Intestinal ultrasound is a bedside, radiation-free imaging method to systematically assess of the small and large bowel, and takes 20-30 minutes. It can be incorporated into a clinical assessment by the gastroenterologist – or as a stand-alone test. It assesses bowel wall thickness, vascularity, motility and complications of inflammatory bowel disease (IBD) such as stenoses and fistulas. It also can also visualised whether a patient is faecally loaded, or has excessive small bowel gas. Findings are interpreted in clinical context, allowing immediate management decisions and timely communication back to the referring GP.

Why consider IUS?

- **No radiation** – safe for repeated monitoring. Can be used as well or instead of colonoscopy for serial assessments
- **Well tolerated** – no bowel preparation or sedation. The patient can move and talk during the assessment
- **Rapid results** – immediate clinical correlation by a gastroenterologist, which can be shown to the patient in real-time, and used to guide decision making.
- Cost-effective compared with cross-sectional imaging, with equal accuracy
- Well validated for the assessment of ulcerative colitis and Crohn's disease activity
- Visualises the proximal small bowel, beyond the reach of gastroscopy and colonoscopy
- Suitable in the post-operative setting, such as anastomotic inflammation or other Crohn's disease recurrence.
- **Provides valuable non-IBD related information** – such as faecal loading, and small bowel gas content, which can be used to guide functional gastrointestinal complaints (such as tailored treatment in IBS).

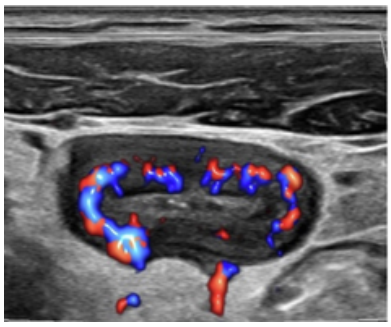
Limitations of IUS

- More difficult in obese patients (though there is no weight cut off – it's often worth trying at least once)
- Difficult to see rectum (unless the patient has a full bladder), therefore often *combined* with a faecal calprotectin
- Though the findings might be highly suggestive eg of IBD, a colonoscopy is often needed to make a definite diagnosis and exclude other mimics such as lymphoma.
- At present, there is a paucity of trained gastroenterologists who perform this scan

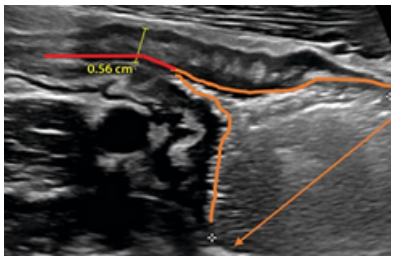
How can I refer for an intestinal ultrasound

You can find a GENIUS accredited intestinal ultrasound gastroenterologist here, though of note –not all gastroenterologists perform this in their rooms, and may not accept GP referrals. It is worth checking before you make a referral

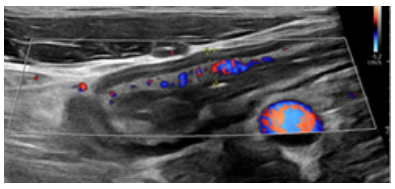
When making a referral, it is useful to include that you think an intestinal ultrasound is warranted, and include relevant: history including family history, other previous investigations, and recent tests such as a faecal calprotectin.



A thickened, inflamed small bowel loop with markedly increased blood flow on Doppler ultrasound – showing severe active inflammation



A thickened, inflamed small terminal ileal stricture with marked pre-stenotic dilatation, showing a small bowel obstruction from a Crohn's disease stricture.



A thickened, inflamed sigmoid colon, in keeping with moderately severe active ulcerative colitis