GUT FEELING GASTROLAB NEWS FOR GPs

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THIS ISSUE Faecal calprotectin | Small intestinal bacterial overgrowth

Faecal calprotectin

Chronic diarrhoea is a common complaint, and it can be difficult to differentiate between those patients with organic disease, particularly inflammatory bowel disease (IBD), and those with irritable bowel syndrome (IBS). A pragmatic guide for the investigation of patients with diarrhoea in the primary care setting was published earlier this year in the British Medical Journal[1]. The authors suggest that a patient with "red flag" pointers in the history, such as older age, PR bleeding, or a family history of colorectal cancer, should be referred without delay to a specialist. However, for those patients without red flags, primary investigation should be guided by the history and may include CRP, ESR, coeliac serology, faecal culture and multiplex, faecal elastase, and faecal calprotectin.

Faecal calprotectin is a relatively new investigation that is increasingly being used as a non-invasive test for the presence of intestinal inflammation. Calprotectin is a zinc and calcium binding protein that is derived from neutrophils and monocytes. Faecal calprotectin can be used in the assessment of patients with symptoms of irritable bowel syndrome, particularly those with diarrhoea. A faecal calprotectin level <50µg/g has a negative predictive value of 98% for organic disease. Thus, a patient with diarrhoea without red flags and a faecal calprotectin <50µg/g has a 2% risk of organic disease. Patients found to have elevated faecal calprotectin in a primary care setting should be referred for specialist assessment.

Faecal calprotectin can also be used in a specialist setting in the management of patients with inflammatory bowel disease. The level of calprotectin has been shown to reflect endoscopic activity with reasonably good sensitivity and specificity[2]. Serial measurements in an individual patient with IBD can be a useful, non-invasive way to measure response to treatment. The goal of IBD treatment, complete mucosal healing, is reflected by faecal calprotectin <50µg/g. Therefore many specialists are now using faecal calprotectin to guide management and reduce the need for frequent endoscopic assessment.

Small intestinal bacterial overgrowth

We are increasingly recognising that the gut flora has a critical role in maintaining immune function and digestive health. We harbour hundreds of species of bacteria in our intestine, with the majority of the microbes in the colon. In health there are relatively few bacteria living in the stomach and small intestine due to the effects of peristalsis and acidity. Overgrowth of these bacteria, known as small intestinal bacterial overgrowth (SIBO), has for many years been recognised as a cause of malabsorption in patients with short bowel syndrome and other anatomical variants, but recent evidence suggests it may also be a cause of symptoms in patients with Crohn's disease and even irritable bowel syndrome (IBS).

Symptoms of SIBO relate to malabsorption and excessive gas production. Patients typically present with diarrhoea, particularly steatorrhoea, abdominal bloating, flatulence and weight loss. Less frequently they may have documented nutritional deficiencies such as vitamin B12, and fat-soluble vitamins such as vitamin D.

SIBO should be suspected in patients with anatomical abnormalities of the small bowel, including those with Crohn's disease, or who have had previous surgery, including ileocaecal resection. In addition, patients with conditions that predispose towards reduced intestinal peristalsis should be identified, such as those with diabetes or scleroderma. Finally, patients with chronic pancreatitis or cirrhosis have an increased incidence of SIBO, the cause of which is likely to be multifactorial.

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There is controversy regarding the presence of SIBO in IBS. There have been multiple studies examining this issue, with conflicting results[3]. While patients with IBS do appear to have altered gut flora, it remains to be seen if there are a subset of patients with IBS who may benefit from treatment of SIBO. My personal practice is to consider SIBO in patients with IBS-diarrhoea predominant, in whom standard measures have failed to produce consistent improvement in symptoms.

SIBO can be difficult to diagnose as no investigation has reliably high sensitivity and specificity. The gold standard of diagnosis of SIBO is endoscopy and culture of jejunal aspirate. Although gastroscopy is often performed to exclude coeliac disease, jejunal culture is very rarely performed now due to the invasive nature of the test and technical limitations in obtaining and processing the samples. Jejunal culture has been largely superseded by hydrogen/methane breath testing, using glucose as the substrate. Glucose is readily absorbed in the small bowel and therefore under normal circumstances should not result in a rise in breath hydrogen or methane. A glucose hydrogen/methane breath test is therefore a readily available, non-invasive and sensitive test for SIBO.

The mainstay of treatment of SIBO is antibiotics, although some patients will be able to have surgery to correct the underlying cause, such as jejunal diverticulosis. I usually start with a 10-day course of amoxycillin-clavulanate, which often results in immediate improvement in symptoms. If symptoms recur patients often respond to regular courses of rotating antibiotics to reduce the gut flora and keep symptoms at bay. The use of a non-absorbable antibiotic, rifaxamin, has been studied with good results in patients with SIBO including those with IBS[4]. However this drug is currently not approved for this use within Australia. The involvement of an experienced dietitian is also critical in maintaining the patients weight and treating micronutrient deficiencies.

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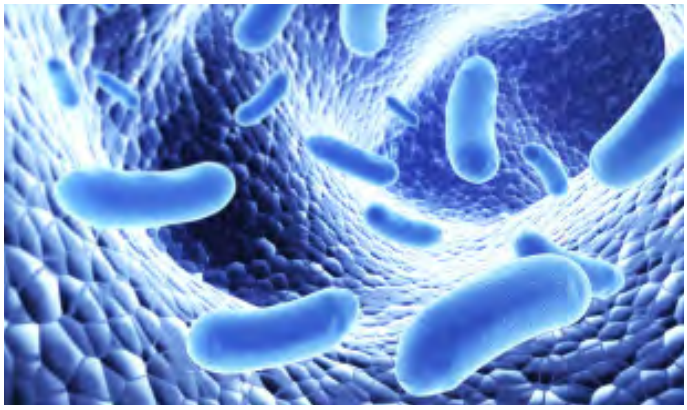
Dr Josephine Grace, MB ChB MRCP FRACP PhD
Gastroenterologist and Hepatologist

Gastrocare, 4/210 Burgundy St, Heidelberg VIC 3084
Austin Hospital, Heidelberg VIC 3084



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Dr Paul Froomes
(BMS MBBS FRACP MD)
Gastroenterologist

Dr Adam Testro
(MBBS FRACP PhD)
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