Letters, Book reviews


Following an initial study examining the need for an antireflux procedure during laparoscopic Heller’s cardiomiotomy, we reviewed our experience at our hospital in patients undergoing such surgery with a protocol that includes pre and postoperative 24 hour pH monitoring. The 12 patients who had undergone preoperative pH monitoring had a median composite DeMeester score of 0.45 (range 0.2-16.8) (upper limit of normal 14.72 at pH threshold <4) only one patient showed abnormal oesophageal acidity at this stage. Postoperatively in 10 patients the mean pH score increased to 6.00 (range 0.02-19.6) with two patients lying outside the normal range, one of whom had probably had an inadequate myotomy.

Preoperatively significant reflux was extremely uncommon and these results do not support the hypothesis that the heartburn experienced by patients with achalasia is due to acid reflux. Even after a myotomy completely dividing the lower oesophageal sphincter very few patients showed significant GORD despite their apsertastic oesophagus and it seems likely that factors such as the tissue fibres of the diaphragm contribute to its effective anti-reflux function in most patients. A review of 75 reports covering 5002 patients with achalasia gave an average incidence of postoperative GORD of 8-6%. It is improbable that the large numbers of such patients refluxed significantly before the development of their achalasia as speculated by their authors.

G S M ROBERTSON

Department of Surgery

A C B WICKS

and Gastroenterology

Lancaster General Hospital NHS Trust,

Gowendon Road, Lancaster LE5 4PW


Exploitation by thickening the 'umbrella' of enteral nutrition. Diet. 1985; 37: 247-55. Using a rat model of colitis induced by 30 mg trinitrobenzenesulphonic acid in 0.5 ml 50% ethanol (TNBS/SE) we have similarly shown the importance of the L-arginine-nitric oxide pathway in mucosal inflammation. L-arginine given by mouth, the biosynthetic precursor of nitric oxide, promoted the inflammatory response in experimental colitis. Administration of L-NAME (L-NMMA) to the arginine supplemented diet reduced both colonic inflammation and weight loss. In accordance with Rachmilewitz and colleagues, we have also found that oral administration of L-NAME, as a nutritional supplement, reduced colonic inflammation in this model of colitis.

Bacteria, bacterial products, and cytokines may all promote the production of calcium independent nitric oxide synthesis in the colonic mucosa. There is evidence that enteric bacteria and their products can penetrate the gut mucosal barrier in patients with inflammatory bowel disease and in experimental models of colitis. Increased faecal concentrations of tumour necrosis factor alpha have also been shown in both IBD and TNBS/SE induced colitis. In addition we have recently shown that administration of an anti-tumour necrosis factor antibody reduces the inflammatory response in this model of colitis. It is therefore possible that these bacterial products could also exert a pro-inflammatory action in patients with IBD by the induction of nitric oxide synthesis.

We agree with the authors that modulation of nitric oxide synthesis activity may have therapeutic potential in IBD. As shown by Rachmilewitz and colleagues L-NAME given by mouth has potent hypertensive effects, which may limit its usefulness in the treatment of patients with chronic IBD.

A rapid, accurate, non-invasive test is needed for the detection of IBD. The development of tests which are sensitive, specific, and easy to perform is probably the key to the future of diagnostic and monitoring of IBD. The measured of serum IGF-I in plasma may provide such a test. The recent report by Nater et al. on the correlation between serum IGF-I and body mass index in IBD patients needs to be confirmed in a larger series of patients.

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G S M ROBERTSON

Department of Surgery

A C B WICKS

Lancaster General Hospital NHS Trust,

Gowendon Road, Lancaster LE5 4PW


Heartburn in patients with achalasia

EDITOR.—We were interested to read the thoughtful paper on heartburn in patients with achalasia, in which the authors hypothesised that the heartburn described by 48% of achalasia patients eligible for review was related to gastro-oesophageal reflux disease (GORD) and documented on manometry a relative reduction in basal lower oesophageal sphincter pressure in such patients (Gut 1995; 37: 305-8).

They themselves note that there are many alternative causes for heartburn in patients with achalasia and performed no pH monitoring to support what they admit remains speculation. However, if such a group of patients did exist and could be reliably selected they would clearly be candidates for an antireflux procedure at the time of treatment by surgical myotomy.


The exploitation in information technology has revolutionised the way knowledge is sought and processed, but in a manner that reduces the impact of pictorial images on education. The role of the classic textbook as pivotal to teaching is increasingly challenged by
Experimental colitis is ameliorated by inhibition of nitric oxide synthase activity.

P J Neilly, K R Gardiner and B J Rowlands

Gut 1996 38: 475
doi: 10.1136/gut.38.3.475

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