

Bleeding Location In The GastroIntestinal Tract: the BLITGIT study

Introduction: Current guidelines suggest upper and lower GI endoscopy to investigate iron deficiency anaemia (IDA) because of a perceived low risk of small bowel pathology. This is the first study to investigate the entire gastrointestinal tract to localise lesions suspected of causing blood loss in patients with IDA.

Methods: Patients referred to three centres (Sheffield, Hong Kong and Szekesfehervar, Hungary) for the investigation of IDA underwent small bowel (SB) capsule endoscopy (Navicam, AnX Robotica, Plano, US) a week prior to upper and lower gastrointestinal endoscopy. All lesions were described using terms selected from a predetermined diagnostic list and according to the perceived likelihood of bleeding (P0: unlikely; P1: suspected; P2: likely. Saurin et al., Endoscopy 2003).

Results: Assuming a true prevalence of small bowel lesions of 10% in patients with IDA, a sample size required to have 80% power of getting a 95% confidence interval for the prevalence no wider than 10 percentage points is 160 patients. 167 patients (median age 60 years (IQR 46-72); 53.0% male) had a median haemoglobin of 102.5 g/L (IQR 92.5-117.0), ferritin 11(IQR 7- 18) and iron 6 (IQR 4- 10). Completion rates for gastroscopy, colonoscopy and capsule endoscopy were 99.4%, 95.0% and 90.0% respectively. Diagnostic yield of P1/P2 lesions by SB capsule (46.7%) was higher than gastroscopy (28.0%) and colonoscopy (31.0%); $p < 0.001$. Four patients were diagnosed with coeliac disease based on capsule endoscopy and duodenal biopsy. A further three patients had fresh blood seen on capsule the source of which was unclear.

Gastroscopy pathology		Small bowel pathology		Colonoscopy pathology	
Oesophageal ulcer:	7	Angioectasia:	51	Colorectal cancer:	8
Oesophageal Varices:	2	Small bowel ulcers:	21	Haemorrhoids:	22
Gastric tumour:	2	Ulcerated stenosis:	3	NSAID induced ulcer:	1
Gastric ulcers:	5	Polyp with eroded surface:	2	Terminal ileal ulceration:	4
Gastric angioectasia:	1	Small bowel erosions:	30	Terminal ileal erosions:	3
Gastric erosions:	24			Angioectasia:	2
Gastric polyp with eroded surface:	3			IBD:	2
GAVE:	3			Radiation proctitis:	2
PHG:	1				
Large friable duodenal adenoma:	1				
Duodenal ulcer	2				
Duodenal erosions:	5				
Duodenal angioectasia:	2				

Table-1: Number of patients with P1/P2 pathology identified at gastroscopy, SB capsule and colonoscopy.

Conclusion: Pathology suspected of, or likely to be, causing blood loss in patients with IDA appears to be commoner in the small bowel than the proximal GI tract or colon. Small bowel examination should be performed routinely to maximise diagnostic yield.

