Severe rectal bleeding due to Salmonella paratyphi B

Lifethreatening rectal haemorrhage is rare. The commonest causes are diverticular disease, colonic angiodysplasia, Meckel's diverticulum, peptic ulceration in the stomach or duodenum, and trauma. We present a case of massive colonic and rectal bleeding due to Salmonella paratyphi B that required emergency colectomy.

Case report

An 18 year old girl presented with a two hour history of bleeding from the rectum. This followed a two week illness similar to flu, four days of constipation, and then diarrhoea. There was no relevant medical or drug history. On admission she was shocked and feverish (39.6°C) with pulse 120 beats/min and blood pressure 100/60 mm Hg. There were no abnormal signs, but rectal examination showed fresh clots of blood.

Despite active restitution her condition remained critical. Her haemoglobin concentration was 40 g/l, but all other tests including coagulation studies yielded normal results. Findings on gastroscopy were normal. Superior and inferior mesenteric arteriograms showed no evidence of bleeding. Colonoscopy was unsuccessful because of the profuse haemorrhage. A scan using red cells tagged with technetium-99m showed pooling of blood only in the colon, and at laparotomy only the left colon was affected. Colotomy showed bleeding from innumerable shallow ulcers. Extended left hemicolectomy and end colostomy were performed. Continued bleeding from the ulcerated mucosa in the rectal stump required an underrunning suture and packing of the rectum. She received a total of 26 litres of blood and plasma.

Culture of a stool specimen showed Salmonella paratyphi B (phage type Dunde). There were innumerable superficial ulcers 1-12 mm in diameter in the colon, their severity increasing distally (figure). Histologically the ulcers were characterised by a paucity of neutrophils in the granulisation tissue and exudate. The colonic lymphoid aggregates contained many plump histiocytes, some containing debris ("typhoid cells"); similar cells were present in the dilated sinuses of the draining lymph nodes. No vasculitis was seen.

Postoperatively no further complications occurred. The rectal pack was removed after 72 hours and chloramphenicol 50 mg/kg given for 10 days. The colostomy was closed uneventfully two months later.

The methods available for identifying sites of bleeding in the gastrointestinal tract have limitations. Angiography failed to identify the nature of the colonic and rectal haemorrhage in this case, which highlights its inadequacy when there are multiple bleeding sites that individually bleed less than 3 ml per minute, but together produce extensive blood loss.3 The usefulness of scanning with red cells labelled with technetium in detecting the site of bleeding can be limited by blood background activity as there must be a sufficient difference between the levels of circulating and extravasated tracer for the bleeding to be localised reliably.4 It is important to exclude a cause in the upper gastrointestinal tract by endoscopy. Preoperative colonoscopy in these cases, however, is difficult because of the large amounts of clotted blood in unprepared bowel. In retrospect peroperative colonoscopy after colonic lavage might have provided valuable information in this case and is a useful investigation in massive colonic haemorrhage.

Ulceration of the gastrointestinal tract in paratyphoid fever is usually limited to the terminal ileum,5 sometimes leading to the passage of traces of blood through the rectum and even severe bleeding. Intestinal haemorrhage is a rare complication, occurring in 1% of cases.6 We can find no reports of a case similar to ours.

We thank Mr Max Rendall for permission to report this case.

Department of Surgery, Guy's Hospital, London SE1 9RT
J A SPENCE, BSC, MB, house surgeon
R MOGERE, FRCS, surgical registrar
T J PALMER, MRCP, MRCPATH, senior registrar in clinical microbiology
P H ROWE, MA, FRCS, senior surgical registrar

Correspondence to: Mr Rowe.