Mid-duodenal bleeding in chronic renal failure

We report on three patients with chronic renal failure who bled from the mid-duodenum. This has not been reported before.

Case reports

Case 1—A taxi driver aged 30 years underwent cadaveric renal transplantation on 10 February 1978 and was discharged on 3 March with a creatinine clearance of 27.8 ml/min. He was readmitted five days later with melaena and a haemoglobin concentration of 4 g/dl; barium-meal examination and gastroscopy were normal. He was given a transfusion and started on cimetidine but continued to have melaena, so on 11 March truncal vagotomy and pyloroplasty were performed. The melaena continued until 14 March, when mesenteric angiography was carried out showing bleeding in the mid-duodenum (fig a). At operation a bleeding point was found in the second part of the duodenum and underrun. No further bleeding occurred, but he died on 18 March 1978.

Case 2—A housewife aged 37 years presented in February 1978 with end-stage chronic glomerulonephritis and was accepted for haemodialysis. On 21 June she experienced epigastric discomfort and had melaena. Gastroscopy showed gastric erosions, and cimetidine treatment was begun. The melaena continued for two weeks. Repeat gastroscopy showed adherent clot in the first part of the duodenum so truncal vagotomy and pyloroplasty were performed on 8 July. As no blood was found in the stomach or upper duodenum the duodenum was opened. A bleeding point at the junction of the second and third parts was found, biopsied, and underrun. No further bleeding occurred, and she was discharged several weeks later.

Case 3—A 38-year-old housewife with chronic glomerulonephritis underwent cadaveric renal transplantation on 18 May 1978 and was discharged on 7 June with a creatinine clearance of 53.6 ml/min. She was readmitted one week later with a perforated duodenal ulcer, which was oversewn; she started cimetidine treatment and was discharged on 28 June. She was readmitted on 16 July, shocked and with haematemesis and melaena. Gastroscopy showed fresh blood in the first part of the duodenum. She underwent truncal vagotomy and pyloroplasty, and the previously perforated ulcer, the site of haemorrhage, was excised. After further haemorrhage and negative gastroscopy, coeliac-axis angiography was performed, which showed bleeding from the mid-duodenum (fig b). At operation a bleeding point at the junction of the second and third parts of the duodenum was biopsied and underrun. She made a slow recovery and was discharged on 1 September 1978.

The biopsies obtained in cases 2 and 3 were very similar. An inflammatory exudate was present with destruction of the normal mucosal pattern. Also apparent were abnormally dilated blood vessels with the appearance of an angiomatous malformation. Cytomegalovirus inclusion bodies were seen in case 3.

Comment

After renal transplantation the complications of peptic ulceration cause much morbidity and death.

Haemorrhage is the commonest complication, often coinciding with treatment of a rejection episode, and mortality may reach 20-60%.

In our cases bleeding occurred in the mid-duodenum from a normal-looking mucosa, but microscopy showed inflammation and angiomatous malformations of unknown cause. Serological evidence of cytomegalovirus infections may be found in 73-91% of transplant patients. It has not been definitely implicated as causing intestinal bleeding, although the virus has been seen in association with a duodenal ulcer in an immunosuppressed patient. Although we think cytomegalovirus may have been an aetiologic factor, it was not identified in case 2, and we therefore propose that some other pathogenic process must have been operating.

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5 Henson, D, Archives of Pathology, 1972, 83, 477.