Surgery as a ‘last resort’ option for active variceal bleeding further complicated by iatrogenic oesophageal perforation

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Despite the advent of transjugular intrahepatic porto-systemic stent shunting (TIPSS) for variceal bleeding and the wide use of injection sclerotherapy, combined with other medical therapies, patients with active variceal bleeding not responding to endoscopic or radiological therapies are still referred to surgeons. The emergency surgical strategy adopted for five patients referred when emergency TIPSS was still under prospective evaluation is described.

Patients and methods
Between 1988 and 1993, patients initially treated on site for bleeding varices (approximately 20 per year) had their bleeding medically controlled and underwent elective shunting procedures, when indicated. By comparison five patients (three men and two women aged 53–80 years) were referred urgently from other institutions because of continued active variceal bleeding despite the initiation of conventional treatment. All five patients (two with alcoholic and three with chronic hepatic cirrhosis) had Child grade C and stage II hepatic encephalopathy. Four patients were referred in the era when TIPSS was still a technique under scrutiny, explaining why the procedure was attempted in only one patient from this small group (his portal vein was patent). Another patient with cirrhosis due to chronic hepatitis plus hepatocarcinoma underwent angiography, which showed portal vein thrombosis. Before operation none of these patients was suspected as having oesophageal perforation on clinical or radiological grounds.

These patients had hepatic encephalopathy, so it was decided to perform selective devascularization of the upper stomach and lower 8 cm of the oesophagus, together with splenectomy but without oesophageal transection. Initial exploration revealed perforation (range 0.5–2.5 cm in length) of the right anterior side of the abdominal portion of the oesophagus in four patients, probably related to sclerotherapy. In addition to the selective devascularization and closure of the oesophageal perforation (Fig. 1, left inset), a complete 360° fundoplication completed the procedure (Fig. 1, right inset) in order to cover and reinforce the area of oesophageal repair.

Results
Operative morbidity and mortality
The patient, who underwent an unsuccessful TIPSS procedure, died on the tenth postoperative day from multiple organ failure resulting from prolonged hypotension. Hospital stay for the four other patients ranged from 10 to 18 days. A 53-year-old woman with chronic obstructive pulmonary disease died 2 months after operation from acute respiratory distress syndrome. She had no recurrent bleeding from oesophageal varices. The postoperative Gastrografin (meglucamine ditrizoate; Schering, Berlin, Germany) swallow study performed in four patients was normal.

Long-term survival
One brief episode of recurrent bleeding occurred in the patient with hepatocarcinoma 3 months later. She survived for 21 months. A 66-year-old patient with chronic hepatic cirrhosis and a 64-year-old patient with alcoholic cirrhosis survived for 23 and 36 months respectively, without rebleeding. Endoscopy performed at 6 and 12 months demonstrated disappearance or regression of varices in these patients.

Discussion
Nowadays endoscopic sclerotherapy is the major treatment option for variceal bleeding. TIPSS is another promising technique, especially for patients who are reasonable candidates for liver transplantation. However, 20 per cent of patients still bleed or will rebleed during the first year after TIPSS, but the limited supply of
organs for transplantation is an obvious restricting factor. If modern treatments fail or are unavailable, the burden of decision making and the choice of a ‘last resort’ operation will be shifted to the surgeon. The remaining alternatives are surgical portosystemic shunting or devascularization procedures.

The most alarming feature of this report is that four of the five patients had associated perforation of the abdominal portion of the oesophagus. This may be due to the sclerotherapy, to the fact that at least three patients were referred with an inflated Linton tube in place, or to the efforts of vomiting or retching causing laceration or rupture of the lower oesophagus.

Fundoplication was an easy way to bring a local tissue flap over the oesophageal repair. Another speculative benefit of fundoplication was constriction of the gastro-oesophageal junction, causing a decreased venous pressure in the remaining superior oesophageal veins above the level of the fundoplication. The results of this ‘last resort’ strategy in terms of survival and control of bleeding are encouraging.

Acknowledgements

The authors thank Professor R. A. Malt from the Department of Surgery of Massachusetts General Hospital for advice.

References