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Case Report and Review of the Literature

Oesophageal Transection for Bleeding Varices: Case Report and Literature Review

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ABSTRACT

Surgical oesophageal transection for uncontrolled variceal bleeding is a last resort measure that is rarely needed due to modern endoscopic advancements. Since it is infrequently required, most of the younger General Surgeons have not been exposed to this procedure. However, it remains a valuable consideration when endoscopic measures and balloon tamponade fail to control bleeding oesophageal varices and should remain in the armamentarium of the General Surgeon. Here we present a case of such a patient who underwent oesophageal transection as a life-saving procedure with satisfactory outcome, together with a brief literature review on this topic.

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Case Presentation

A 32-year-old man presented to our rural tertiary hospital in Ngwelezana, KwaZulu Natal, South Africa with profuse haematemesis and haemodynamic instability. He was assessed as Child's criteria (Child-Pugh score) category C liver disease. Management included resuscitation and an emergency upper gastrointestinal endoscopy (UGIE). The latter revealed extensive oesophageal varices with profuse bleeding which could not be controlled with endoscopic measures. A Sengstaken Blakemore tube (SBT) was inserted and gastric followed by oesophageal balloons inflated for bleeding control. The patient was admitted to the Intensive Care Unit (ICU) but was returned to theatre three hours later with ongoing variceal bleeding despite the SBT. Via a midline laparotomy the distal oesophagus was mobilized. A circular stapling device was passed via gastrotomy, and the distal oesophagus transected for control of the bleeding varices. Postoperatively the patient was weaned from inotropic support over two days. There was no further bleeding. Enteral feeding was commenced via a nasogastric tube.

On day four the patient developed abdominal hypertension secondary to gross ascites. This was relieved via a subhepatic drain and

spironolactone was started. The patient was discharged to the ward day six post laparotomy. He remained confused for a further week and had one episode of haematemesis on day 13 which was treated expectantly. The subhepatic drain was removed on day 15 and the patient was discharged on day 20 on a beta blocker with follow-up on the oesophageal banding programme. Liver transplant is not available in our region. At 18-month follow-up post oesophageal transection, he remained well, had no reported episodes of oesophageal bleeding and was adherent to the banding programme.

Discussion

Surgical oesophageal transection for uncontrolled variceal bleeding is a last resort measure that is rarely needed due to endoscopic advancements. Since it is infrequently required, most of the younger General Surgeons have not been exposed to it. However, it remains a valuable consideration when endoscopic measures and balloon tamponade fail to control bleeding oesophageal varices and should be retained in the surgical 'toolbox'.

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Bleeding oesophageal varices are a common problem in South Africa [1]. Acute bleeding from oesophageal varices presents in 70% of patients with liver cirrhosis [1, 2]. As it carries a 20% mortality rate in the first 6 weeks it is clear that the gauntlet is flung at the treating physician – even more so in a rural setting where patients often present late and there are limited resources [1]. Stepwise management protocols guide management in the acute setting, with surgery being the last tier [3]. The introduction of endoscopic therapy has significantly decreased mortality from variceal bleeding [4]. Endoscopic banding is widely regarded as the standard of care for both acutely bleeding varices and long-term management followed by repeated injection sclerotherapy for long-term management after an acute bleed [5]. This is in conjunction with vasoactive drugs as medical management [3].

Oesophageal transection with circular stapling devices, reported initially by Venkimmel in 1974, as part of acute management is less discussed in recent years. This is largely due to widespread access to endoscopic therapy which has fewer complications and very favourable results [2, 6]. Initially introduced as an option for Child's A or B patients who do not qualify for shunting or liver transplant as part of the Sugiura procedure, oesophageal transection became an option in emergencies where haemostasis could not be achieved [2, 6]. This invasive method received a lot of attention from the 1970's to 1990's, with multiple successful cases reported [7]. It has been shown to be very effective in achieving haemostasis and preventing rebleeding [6-8]. Complications include hepatic encephalopathy, oesophageal stricture, mediastinitis, pleural effusion, anastomotic leak and subdiaphragmatic collection [2, 6, 9].

Factors directly influencing morbidity are a higher Child score and the severity of the bleed [1, 3, 6]. Jenkins and Shields reviewed their experience of emergency oesophageal transection in 15 patients with variceal hemorrhage after failed injection sclerotherapy between 1980-1986 [8]. Bleeding was controlled in 87% but in-hospital mortality was 73%, and all Child's C patients demised. These authors questioned the role of oesophageal transection in a sequential emergency treatment policy. In a more recent account, with patients reviewed between 1990-2009, the oesophageal transection-related morbidity (leak, bleeding, and stricture) was 8.2% (8/98) and the mortality 28.4% (23/81) [9]. This better survival and fewer complications may reflect advancements in intensive care management of critically ill patients, improved pharmacological management and better circular stapling devices. Therefore, oesophageal transection remains a tangible option for those patients where endoscopic and conservative measures fail.

Summary

Despite significant advances in treatment, bleeding oesophageal varices remain a challenging condition. Good outcomes depend on swift action on the part of the surgical team. While it is clear that endoscopic intervention is less complicated and should be the initial management, oesophageal transection is a proven option for patients where endoscopic measures and balloon tamponade have failed and should remain in the armamentarium of the General Surgeon.

Author Contributions

Dr. Zandri: conception, design, analysis, drafting, approval of the version to be published; Dr. Sharon R Čačala: drafting and critical revision for important intellectual content; and approval of the version to be published; Dr. George V Oosthuizen: conception, approval of the version to be published.

Consent

Written informed consent was obtained from the patient in this case study. BREC Ref No: BCA027/19.

Conflicts of Interest

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