

Gastric bypass of upper oesophageal carcinoma: a case report

F. G. O. OMASWA AND H. R. MATTHEWS¹

From the Liverpool Regional Cardiothoracic Surgical Centre, Broadgreen Hospital, Liverpool

Omaswa, F. G. O. and Matthews, H. R. (1977). *Thorax*, 32, 229–231. **Gastric bypass of upper oesophageal carcinoma: a case report.** A case is presented in which an oesophagogastric bypass was constructed in the neck for palliation of an unresectable carcinoma of the oesophagus at the level of the aortic arch.

In the treatment of carcinoma of the oesophagus the first objective of the surgeon is to relieve dysphagia. Resection of the tumour, with a wide margin of oesophagus, and reconstruction of the alimentary canal is the method of choice, but if this is not possible surgical bypass or permanent oesophageal intubation are the main alternatives.

For bypass of tumours in the lower half of the oesophagus, a variety of procedures has been described, but the problem of bypassing a growth at the level of the aortic arch that has necessitated right thoracotomy and has proved to be unresectable has received scant attention.

This paper reports one case in which this problem was successfully overcome by side-to-side oesophagogastrostomy in the neck.

Case report

A 58-year-old man was admitted to this unit in February 1976 with a two-year history of dysphagia. Barium studies showed a smooth, tight stricture at the level of the aortic arch which was confirmed by oesophagoscopy. Biopsy failed to show any evidence of malignancy but this was clinically suspected and, in view of the location of the lesion, an approach by laparotomy and right thoracotomy was preferred.

Laparotomy through an upper midline incision revealed normal abdominal contents and no evidence of secondary deposits. The stomach was mobilised, preserving the right gastroepiploic artery, so that it could be placed wholly in the thorax, and an anterior pyloromyotomy was performed.

Right thoracotomy through the fourth intercostal space was then performed. This revealed a tumour, 7.5 cm long, centred at the level of the aortic arch, which was directly invading the third and fourth thoracic vertebral bodies and the media of the aorta. Biopsy taken at the time showed 'undifferentiated carcinoma infiltrating fibromuscular tissue'. Resection of the tumour was impossible and there was insufficient space above the upper margin of the tumour to construct a bypass anastomosis in the chest. While it would have been possible to insert an endo-oesophageal tube through the tumour, it was felt that this would give only partial relief of dysphagia and that a cervical bypass would provide better swallowing if it was technically possible.

On bringing the stomach into the chest, it was apparent that it would reach the neck around the tumour without undue tension. With the fundus positioned in the thoracic inlet, an anchoring stitch was passed through the stomach and brought out through the skin of the root of the neck on the right side, and the thoracotomy was closed with drainage.

An incision was then made along the anterior border of the right sternomastoid muscle and access to the oesophagus was obtained through the groove between the right carotid artery and the thyroid gland. The cervical oesophagus was mobilised and encircled, and the fundus of the stomach was retrieved by following the anchoring suture. A side-to-side oesophagofundostomy, 3 cm long, was constructed with one layer of interrupted wire sutures and the cervical wound was closed without drainage. The final arrangement after bypass is shown in Figure 1.

After the operation the patient had a temporary

¹Present address: Queen Elizabeth Hospital, Edgbaston, Birmingham B15 2TH

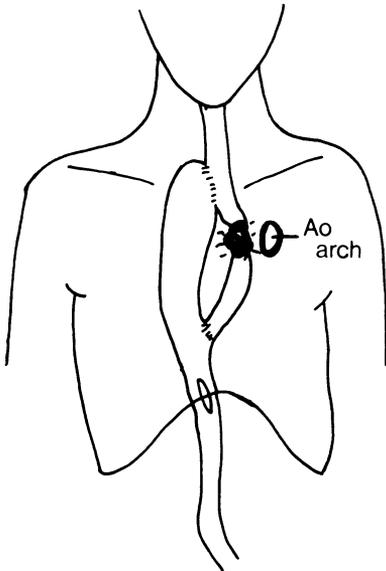


Fig. 1 Diagram showing the anatomical arrangement after operation. The stomach has been anastomosed side-to-side to the cervical oesophagus. The cardia remains patent and an anterior pyloromyotomy is shown.

respiratory infection but no other complications. Oral fluids were begun on the third day and semi-solid food on the fifth day. A Gastrografin swallow on the seventh day showed an open anastomosis with no leak and free flow through the bypass into the thoracic stomach and on to the duodenum. The patient was discharged home on the 16th day taking a normal hospital diet.

At present, five months after operation, he is able to look after himself and his swallowing is as good as when he left hospital. Barium swallow (Fig. 2) shows a patent anastomosis and free passage of the contrast into the thoracic stomach and on to the small bowel.

Discussion

Tumours of the oesophagus at the level of the aortic arch pose special problems in surgical management, because of the difficulty of access from the left side, and are generally approached by right thoracotomy. For purposes of reconstruction, this is usually combined with a laparotomy and/or a cervical incision (Lewis, 1946; McKeown, 1972), but the method of palliation to be used if the growth proves unresectable is not described.

If no attempt is made to explore the primary

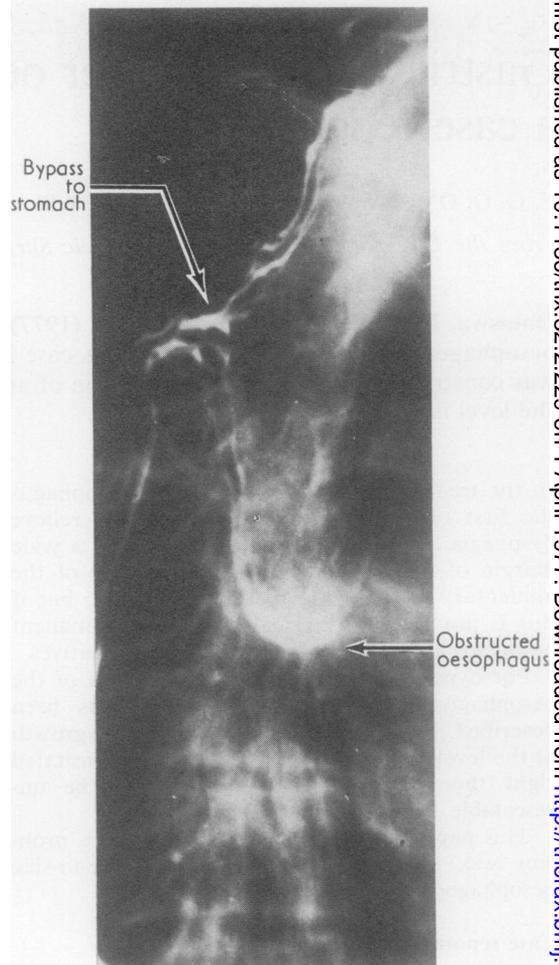


Fig. 2 Postoperative barium swallow showing an obstructed oesophagus and the contrast entering the stomach via the anastomosis well above the tumour.

lesion, then bypass as a planned procedure can be provided by various methods such as substernal colon (Ong, 1975) or substernal stomach (Orringer and Sloan, 1975), but when there is a possibility of resection, or when the diagnosis is not even proven, thoracotomy should be performed. If the lesion proves to be unresectable, the operation described here may be a satisfactory alternative.

The advantages are that it utilises only one suture line, there is no necessity to exclude the oesophagus either above or below the tumour (which may create a 'blind-loop'), and it is constructed using a viscus that has already been

mobilised for the purpose. When successful, it provides much better swallowing than would be obtained from intubation alone, and the morbidity of the procedure should be no greater than that of oesophageal resection.

While this procedure may have only a limited place, the present case does illustrate that it is technically feasible and satisfactory and that it may provide a solution to an uncommon but unpleasant surgical dilemma.

References

Lewis, I. (1946). The surgical treatment of carcinoma of the oesophagus: with special reference to a new operation for growths of the middle third. *British Journal of Surgery*, **34**, 18–31.

McKeown, K. C. (1972). Trends in oesophageal resection for carcinoma: with special reference to total oesophagectomy. *Annals of the Royal College of Surgeons of England*, **51**, 213–239.

Ong, G. B. (1975). Unresectable carcinoma of the oesophagus. *Annals of the Royal College of Surgeons of England*, **53**, 3–14.

Orringer, M. B. and Sloan, H. (1975). Substernal gastric bypass of the excluded thoracic esophagus for palliation of esophageal carcinoma. *Journal of Thoracic and Cardiovascular Surgery*, **70**, 836–851.

Requests for reprints to: F. Omaswa, M.Med.(Surg.), Registrar in Thoracic Surgery, Broadgreen Hospital, Thomas Drive, Liverpool L14 3LB.