Reconstruction of Oesophagogastric Continuity
Using an External Double Skin Tube – A Long-Term Result

J.C. McGregor and A. C. Buchan
Department of Plastic Surgery, Bangour General Hospital, West Lothian, UK

Summary. Following resection of the lower oesophagus and part of the stomach as a result of a hiatus hernia stricture, a reconstructed presternal skin tube reconstruction was created. This has enabled satisfactory swallowing for over 10 years though there have been occasional problems with stricture formation.

Key words: Hiatus hernia stricture – Presternal skin tube reconstruction

History

A 49-year-old female presented in 1971 to the general surgeons with a history of dysphagia associated with hiatus hernia and stricture of the lower oesophagus. She required resection of part of the oesophagus and stomach with a segment of small bowel interposed to bridge the gap. Unfortunately this failed. As a life saving measure the remaining proximal oesophagus was brought out externally on the chest as an oesophagostomy while the stomach remnant was brought out as a gastrostomy (Fig. 1). Feeding was thereafter through a cuffed Foley catheter. While she was able to go home, she became extremely depressed. She was referred to one of us (ACB) for a plastic surgical solution.

It was decided to try to join the two fistulae with an external skin tube reconstruction from the adjacent chest and abdomen (Fig. 2–5). Basically the tube was created from two rolled flaps lying side by side with one single tube being created by opening up the adjacent midline walls. The upper

Fig. 1. Gastrostomy with feeding Foley catheter. In the upper left chest the oesophageal fistula is shown

Fig. 2. A long tube of skin has been created from the right chest and upper abdomen. The base of this is in the midline. The secondary defect is skin grafted (tie-over dressing)
and lower ends of this tube capped the two fistulae. This required four staged procedures completed over five months (all surgery by ACB). Initially liquid feeds were given followed by solid food after a few weeks. Barium swallow demonstrated free flow of barium through the reconstructed tube. Though she went through an initial period of depression related to the cosmetic appearance, this lifted and her morale and general wellbeing noticeably improved. Over the past few years, while generally remaining well, she has had periods of intermittent dysphagia related to the development of a small stricture at the junction between the tube and stomach. In 1983 an exploratory operation revealed a benign stricture which was resected successfully with reconstruction of continuity being maintained by mobilising stomach to rejoin the skin tube. She remains well to date. A recent barium swallow confirms patency (Fig. 6).

Fig. 3. A few weeks later a similar tube is raised from the left chest and abdomen again being based in the midline

Fig. 4. The two completed tubes are joined into one larger hollow tube by excision of the central ridge of tissue between them

Fig. 5. The final reconstruction appearance. The oesophagostomy and gastrostomy openings have been included into the skin conduit by folding over adjacent flap limbs

Fig. 6. A recent barium study showing barium flow through the presternal skin oesophagus into the stomach