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CASE REPORT

Palliation of anastomotic tumor recurrence after esophagectomy and gastric transposition: cervico-mediastinal resection and reconstruction by using a free jejunal transplant

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INTRODUCTION

Patients with anastomotic tumor recurrence after esophagectomy and cervical esophagogastrostomy have limited therapeutic options. Non-resective treatment fails to control tumor progression and can provide only short-term palliation for food intake and respiration. The clinical course of these patients is characterized, however, by an unfavorable prognosis and a poor quality of life.

This report concerns a patient with a high post-cricoidal anastomotic recurrence of an esophageal carcinoma, who developed both an esophagotracheal and an esophagocutaneous fistula. Since a palliative trial with wallstents did not provide prolonged relief, we decided to perform palliative resection as the patient was free of metastatic disease.

CASE REPORT

The patient was a 53-year-old man with a squamous cell carcinoma of the proximal esophagus. Esophagoscopy and biopsy showed a lesion of 8 cm in length at a distance of 3 cm behind the cricoid cartilage. Based on these findings, we proposed radical laryngoesophagectomy as the treatment of choice, but the patient refused laryngectomy.

A transthoracic esophagectomy with en-bloc lymphadenectomy was performed. The approach was via a right thoracotomy. The esophageal stump left behind measured 2 cm with a tumor free margin verified by intraoperative frozen section. The reconstruction was done with a gastric pull-up using the retrosternal route. The postoperative course was uneventful.

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Three months later, the patient presented with dysphagia and symptoms of aspiration due to a stenosis at the anastomotic site. In addition, an esophagocutaneous fistula had developed. Endoscopy and computertomography revealed a local recurrence. As palliative treatment, dilation (onto 12 mm diameter) and implantation of a 2AV wall-stent (92 mm length 16 mm diameter) was performed and induced a spontaneous closure of the fistula. Temporarily, unimpeded swallowing was possible.

Five months later, the patient returned to our clinic in poor general condition due to advanced disease. CT-Scan revealed a large tumor mass invading the larynx, the sternal bone and the brachiocephalic vein (Fig 1A). Now, with the agreement of the patient, we decided to perform a radical cervico-mediastinal tumor resection and esophageal replacement with a free jejunal graft.

The radical surgery required the resection of the involved skin, the upper part of the sternum including the sternoclavicular joints with adjacent parts of the clavicula and the upper three ribs as well as the larynx, hypopharynx, the upper part of the transposed stomach and the left brachiocephalic vein (Fig 1B).

For reconstruction, an isoperistaltic free jejunum graft (length approximately 35 cm) was used (Fig 1C). Proximal anastomosis of the interposed graft was performed end-side to the oral base, and distal anastomosis end-end to the shortened gastric pull-up. The microsurgical anastomosis was done with the right internal mammarian artery (end to end) and to the ligated azygos vein (end to side). The remaining defect on the neck and chest was covered by a myocutaneous flap from the left pectoralis muscle which covered the operating area. A tracheostoma was inserted into this flap.

The postoperative course was uneventful, the X-ray showed a free passage of the graft (Fig. 2). Food intake was normal, the patient regained weight and had a satisfying quality of life for about 1 year.

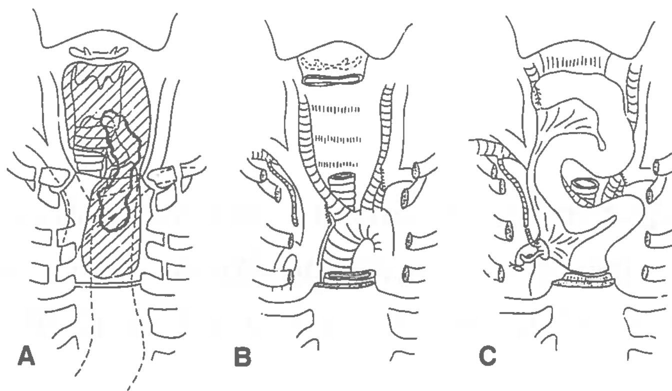

Fig. 1 (A) The recurrent tumor invades the larynx, sternal bone, brachiocephalic vein, skin and muscles. The extent of resection is marked by the hatched area and includes pharyngolaryngectomy and en-bloc resection of the local recurrence with the adjacent parts of the gastric pull-up and with the invaded brachiocephalic vein. (B) The approach to the anterior mediastinum required resection of the upper part of the sternum including sternoclavicular joint, part of the clavicula and the first three ribs. The specimen is removed. (C) Proximal anastomosis of the interposed graft was performed end-side to the oral base, and distal anastomosis end-end to the shortened gastric pull-up. The microsurgical anastomosis was done over the right internal mammarian artery and to the ligated azygos vein.

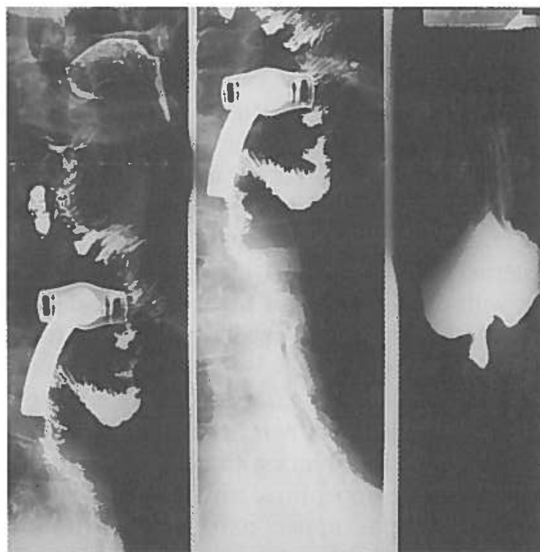

Fig. 2 The X-ray controlled swallow shows a free passage of the graft from the oral base to the stomach without extravasation.

Twelve months later, widespread metastatic disease was evident from the CT-scans, however, an intraluminal tumor recurrence was not detected. Two months later, the patient died.

DISCUSSION

In general, anastomotic cancer recurrence after esophagectomy raises the surgical dilemma with respect to the initial operative procedure in esophageal cancer close to the larynx. Clearly, in our patient, the initial resection was not complete and the findings from the intraoperative frozen sections were misleading: obviously, a forced preservation of the larynx represents a risk for an avoidable early tumor recurrence.

When leading to stenosis and fistula, some endoscopic and radiological methods for palliation are available.[1,2] The disadvantage is, in general, the poor functional result in the situation of rapid tumor progression.

In the case of our patient, neither stenosis nor fistula could be controlled by dilatation and implantation of wall stents. Due to the lack of alternative procedures and the expected poor quality of life,[3] we decided to carry out a palliative tumor resection. The removal of the recurrent cancer and the jejunal reconstruction[4] was possible only because of the retrosternal position of the transposed stomach.[5,6] This technical detail needs to be considered, in particular in cancer of the cervical esophagus located close to the larynx.

The operation markedly improved our patient's quality of life for 1 year. Nevertheless, we stress that this demanding procedure is not recommended as a routine treatment in anastomotic cancer recurrence after esophagectomy, but it should be taken into consideration in selected cases.

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