CASE REPORT

Palliative removal of a giant polypoid 'carcinosarcoma' of the oesophagus by YAG laser photocoagulation of the tumour stalk

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Abstract

Dysphagia in a 79 year old lady was caused by a giant polypoid tumour in mid-oesophagus. Surgery was not appropriate. Shrinkage of the tumour and its eventual detachment were achieved by stopping its blood supply by YAG laser photocoagulation of the tumour stalk. Good, temporary palliation of the dysphagia was achieved.

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Case report

A 79 year old woman presented to another hospital with a six month history of epigastric pain, heartburn, dysphagia, regurgitation, and weight loss. Her past medical history included chronic obstructive airways disease, ischaemic heart disease (two myocardial infarcts and angina of effort), cardiac failure, and type II diabetes.

A barium swallow showed a huge polypoid filling defect in the mid-third of the oesophagus (Fig 1A). Endoscopy showed a large polypoid tumour which was biopsied. The patient was transferred to this hospital for palliative laser therapy of her dysphagia. Further endoscopy showed that the top limit of the tumour was 25 cm from the mouth, and the bottom 32 cm. The polypoid mass almost filled the lumen, but could be bypassed (Fig 2A). It seemed to be attached to the wall of the oesophagus by a narrow stalk.

We decided to try to thrombose the vascular supply to the tumour by repeated delivery of coagulation range laser energies to the stalk without treating the bulk of the tumour (Nd - YAG laser, 50-60 W; 0.5-0.6 second pulses). During four laser therapy sessions over 11 days, the tumour was seen to shrink progressively and became necrotic (Fig 2B). At this stage the patient noticed a significant improvement in her swallowing and was able to eat sandwiches.

At the fourth session, the tumour separated from the wall and passed into the stomach. Some minor oozing from the area of stalk attachment stopped with a few laser pulses. It was not possible to retrieve the friable, slippery necrotic tumour from the stomach without blocking the patient's airway.

A barium meal three days after tumour detachment showed free flow of barium through the mid-oesophagus, which had a normal calibre, and only minimal mucosal irregularity was seen at the site of stalk attachment (Fig 1B). At review endoscopy 10 days later, a small area of superficial ulceration at the point of attachment of the stalk was seen (Fig 2C). Five to 8 cm below that point, ridging of the mucosa was seen and biopsy specimens were obtained.

The patient continued to swallow reasonably well for six weeks. She then had a course of intraluminal radiotherapy, after which she developed intractable burning retrosternal pain. Swallowing solids became extremely painful and ordinary analgesics were not effective. The pain

Figure 1: (A) Barium swallow showing a huge filling defect in the middle third of the oesophagus caused by the polypoid carcinoma. (B) Barium swallow three days after tumour detachment.

Figure 2: (A) Endoscopic view of the upper surface of the polypoid tumour, almost filling the lumen of the oesophagus. (B) The tumour has shrunk after laser photocoagulation of the stalk. (C) Small area of superficial ulceration at the point of attachment of the stalk at review endoscopy 10 days after tumour detachment (arrowed).

did not respond to alginates or omeprazole (40 mg per day). She derived some comfort from oral morphine, but rapidly deteriorated and died three months after successful tumour detachment.

Histology

The biopsy specimen from the tumour surface

showed an ulcerated pleomorphic spindle cell tumour, with sarcomatous appearance (Fig 3A). Subsequent biopsy specimens from the tumour base after the main lesion had become detached showed a superficial component of severe dysplasia of oesophageal squamous epithelium adjacent to invasive squamous carcinoma. The stroma deep to this showed the same spindle cell features as in the previous biopsy specimen (Fig 3B). The characteristic macroscopic polypoid appearance, together with this combination of tumour patterns on histology, indicate the diagnosis of so called 'carcinosarcoma'.

Discussion

When first reported in 1957 by Stout and Lattes,¹ 'carcinosarcoma' or 'pseudosarcoma' of the oesophagus was thought to be a mixed tumour containing both carcinomatous and sarcomatous elements. The term 'carcinosarcoma' is attributed to Virchow.² It is a rare tumour and often grows to enormous size.³ Histologically, it contains both squamous carcinoma and malignant spindle cell components.⁴ Metastases from these tumours usually show squamous carcinoma characteristics.^{1,4,5} Studies using electron microscopy and immunostaining showed cytoplasmic organelles specific for squamous cells in the spindle cells of these polypoid tumours and the histological appearances are now considered to represent divergent patterns of differentiation in squamous cell carcinoma.^{4,7,8} These tumours may also occur in the pharynx, larynx, and the oral cavity.⁹

Osamura *et al* (1978) suggested that 'carcinosarcoma' and 'pseudosarcoma' are one and the same tumour, and proposed that these tumours be referred to as 'polypoid carcinomas'.¹⁰

Because of their size, these polypoid tumours were thought to present early, resulting in a better prognosis after resection.^{11,12} A review of the prognosis in 44 reported cases suggested that it is no different when compared with that of non-polypoid squamous carcinoma.² Local excision is almost invariably followed by recurrence.⁶ As in our patient, carcinoma in situ or invasive carcinoma, or both, is often found at the base of the tumour stalk and also in the mucosa some distance from tumour attachment.⁶ Radical oesophagectomy is, therefore, advised if a cure is hoped for. In this age group, radical oesophageal surgery is associated with a high mortality and morbidity, and would certainly not constitute good palliation.^{2,13,14}

Decreasing the bulk of the tumour could have been achieved by injection of alcohol or other sclerosing solutions into the tumour body^{15,16} or by laser photovaporisation of the main part of the polyp.^{17,18} Because of the enormous size of the tumour, both these methods would have required many sessions of therapy. As we could see the tumour stalk clearly, it was possible to direct the laser energy (using coagulation rather than vaporisation energies) directly at this, and rapid, safe removal of the tumour was achieved.

There are rare benign polypoid tumours of the oesophagus, often on long stalks^{19,20} which hitherto were treated by surgery. This simple and safe technique could be used in the treat-

Figure 3: (A) Original superficial tissue specimen of the polypoid tumour. The tissue is degenerating, but clearly shows a spindle cell tumour containing several hyperchromatic pleomorphic nuclei (arrows). (B) Subsequent tissue specimen of abnormal oesophageal wall after detachment of the tumour. Most of the biopsy is surfaced by squamous carcinoma in situ (single arrow) and invasive, non-keratinising squamous cell carcinoma (double arrows). A small area of normal oesophageal squamous epithelium is present at one side (open arrow). The underlying stroma shows a 'sarcomatous' pattern, as seen in the previous specimen. (Haematoxylin and eosin original magnification $\times 64$ and $\times 32$ respectively.)

ment of such tumours and major surgery avoided.

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