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# Late scar recurrence in mucoepidermoid carcinoma of base of tongue

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**Abstract**
Recurrence in mucoepidermoid carcinoma of the salivary gland after 15 years is rare and present difficult therapeutic decisions. A rare case of mucoepidermoid cancer of the base of the tongue that recurred locoregionally after 20 years and was managed judiciously by a planned combined modality approach is presented.

**Key words: Mucoepidermoid tumour, Salivary glands, minor; Tongue**

## Introduction

A case of advanced recurrent mucoepidermoid carcinoma in a 20-year-old scar of a midline labiomandibuloglossotomy performed for excision of a base of tongue minor salivary gland tumour is presented. The literature is reviewed, the behavioural pattern, and therapeutic option of such tumours are discussed briefly.

## Case report

A 59-year-old male presented with a left submandibular swelling of size 2 × 2 cm which was firm and mobile. He gave a history of being treated for mucoepidermoid carcinoma of a minor salivary gland at the base of the tongue 20 years previously elsewhere. Old treatment records revealed that he had undergone a wide excision of a tumour in the base of the tongue by a midline labiomandibuloglossotomy approach after a preliminary tracheostomy. The histopathology report was a mucoepidermoid tumour of the minor salivary gland. He was declared to be disease-free after a 10-year period of follow-up at the same centre.

On examination, there was a palpable induration at the base of tongue, that did not appear to be significant. Indirect laryngoscopy (IDL) did not reveal any local recurrence. With a clinical suspicion of nodal recurrence, fine needle aspiration cytology (FNAC) was carried out but was found to be negative. Since he did not have any other symptoms he was kept on monthly follow up. On his next visit the suspected node had enlarged slightly to a size of 2.5 × 2.5 cm and had become firm to hard in consistency. IDL was negative and induration was unchanged. A repeat FNAC was done which was inconclusive again. During the third visit the swelling was 3.5 × 3.5 cm and a new nodule 2.5 × 2.5 cm had developed at the submental region. The consistency was hard and the former swelling was now adherent to the lower border of the mandible. A firm mobile upper deep cervical (UDC) node of size 2.5 × 2.5 cm was also palpable on the same side. IDL revealed a smooth bulge in the lateral pharyngeal wall and the lateral wall of pyriform fossa. With a presumptive diagnosis of locoregional recurrence of mucoepidermoid carcinoma the FNAC was repeated and this time it was reported as metastatic mucoepidermoid carcinoma.

Computed tomography (CT) scan of the head and neck did not show any definite intraluminal involvement of the oropharynx or laryngopharynx, although the recurrent

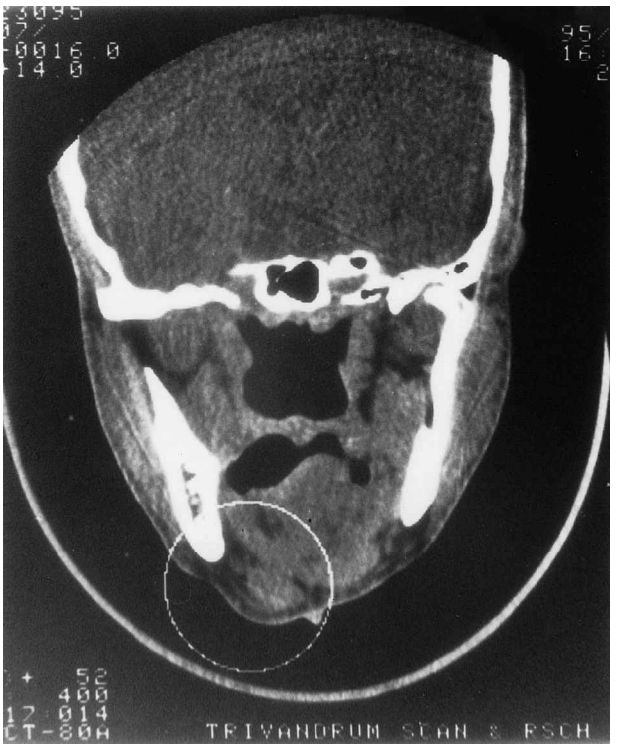


Fig. 1
Coronal (plain) CT scan of the recurrent nodule at the submandibular region.

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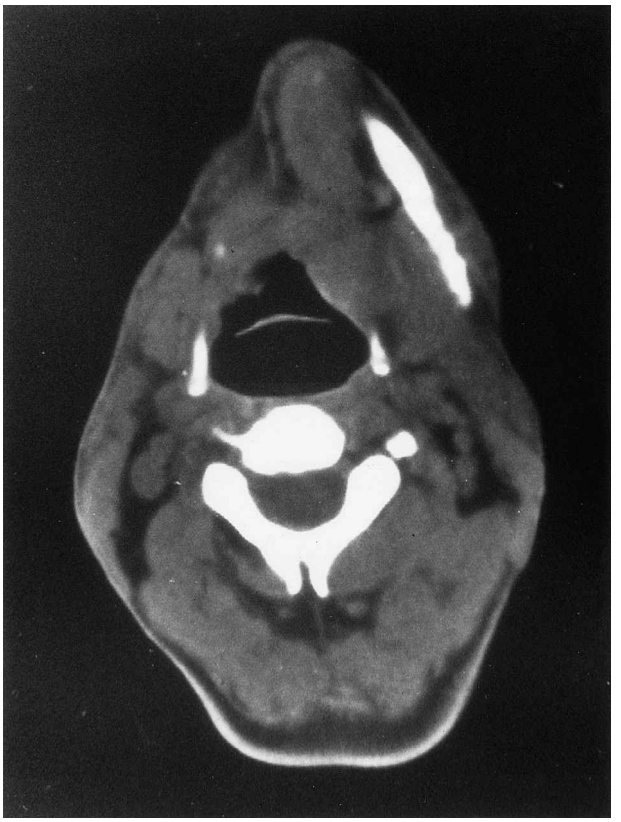

FIG. 2
Axial (plain) CT scan of the scar recurrence invading the hyoid bone and the lateral pharyngeal wall.

tumour mass was encroaching these areas. A therapeutic decision of extended radical neck dissection with an excision biopsy of the suspicious base of tongue induration was made.

However during his next visit for surgery after a gap of three weeks the swellings were found to be enlarging and a fresh mid deep cervical (MDC) node of size 1.5 × 1.5 appeared. Hence it was decided to give the patient the benefit of combined modality of treatment (surgery with adjuvant radiotherapy).

A McFees incision was placed incorporating the previous incision scar and the extended radical neck dissection (RND) was carried out. It was found that the upper nodules detected clinically were actually a tumour recurrence along the scar that ran along submental and submandibular region and this could be traced down to the hyoid and the lateral wall of the pyriform fossa. Significant lymph nodes were found at levels II, III, IV, and V.

An extended RND with marginal resection of the lower borders of the mandible where the tumour was adherent, along with the tumour invading the hyoid and lateral wall of the pyriform fossa (which was excised without opening into the hypopharynx) was done. The patient was discharged after an uneventful post-operative period.

The histopathology report was low grade mucoepidermoid carcinoma. Current tumour involvement was seen in the excised scar up to the hyoid and lateral wall of the pyriform fossa. All lymph nodes were positive for metastasis. However the base of tongue induration was free of tumour. Post-operative external radiotherapy was given to the oropharynx and hypopharynx and to the entire neck to a dose of 60 Gy in 30 fractions over six weeks and a small field boost of 4 Gy was given in two fractions to the cut margins. The patient is disease-free after three years of follow up.

## Discussion

Malignant salivary gland tumours account for about seven per cent of all malignant epithelial tumours involving the upper aerodigestive tract out of which minor salivary glands that lie beneath the intact mucosa of the upper aerodigestive tract form a major proportion.[1]

Minor salivary gland tumours of the base of tongue are encountered infrequently and almost all of them are malignant. The most common histological type is mucoepidermoid carcinoma.[2] The characteristic histological pattern of mucoepidermoid carcinoma is the presence of atypical squamous cells showing focal mucin production. Metastasis is commonly via lymphatics and infrequently via blood vessels although metastases to the skin have been reported.[3]

Mucoepidermoid carcinomas occur between age of five to 96 years, most frequently in the sixth and seventh decade of lfe. The average age of the patient is less than 50 years (48.9 years). There is a slight predisposition of females (56.3 per cent). Minor salivary glands of the oral cavity and oropharynx are infrequent sites for such tumours. Fifty-three per cent of all mucoepidermoid carcinomas can be classified as highly differentiated and the remaining 46.8 per cent as poorly differentiated. Among the variants of mucoepidermoid carcinoma, cystic (25.4 per cent), clear cell (11.0 per cent) and oncocytic (0.6 per cent) tumours can be observed. Clear cell type of mucoepidermoid carcinoma tends to originate from minor salivary glands (69.5 per cent).[4]

Even after adequate surgical clearance recurrence rates may be as high as 26 per cent.[5] Locoregional control rates may be improved by adjuvant radiotherapy,[6] particularly in advanced cases[7] and those with positive margins.[8] The therapeutic decision for this is based on an understanding of the natural history of that particular malignant cell type.[9]

CT scan is an important adjuvant to pre-operative assessment of the tumour though magnetic resonance imaging (MRI) is superior to it in terms of tumour margination.[10] FNAC confirms the tissue diagnosis, with reasonable accuracy.[11]

An extensive review of the literature revealed very few cases of recurrence in mucoepidermoid carcinoma after 15 years.[1,8] This case, we believe is the first case report of late locoregional recurrence along a scar of incision used previously for approach to the tumour.

## Conclusion

Recurrent minor salivary gland tumours usually present a difficult therapeutic decision and in spite of aggressive management they do badly.[12] Combined modality is probably the best way to treat these tumours.

This case is being reported for its rarity in occurrence and complicated presentation and also to highlight the role of subradical surgery combined with adjuvant post-operative radiotherapy in its management. A wider extirpation of the tumour would have entailed excision of hyoid bone and partial pharyngectomy, followed by primary reconstruction. A permanent tracheostomy would also have been required, that would have considerably increased the morbidity of the patient. The change in the biological behaviour of the apparently slow-growing tumour at the time of its recurrence is also remarkable.

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