The mucoepidermoid carcinoma (MEC) was originally described by Volkmann in 1895. MEC has since emerged in most series as the most commonly diagnosed primary malignancy of the major salivary glands. Histologically, MEC is composed of various combinations of epidermoid, mucous and intermediate cells; the latter cell is presumed to be the precursor of the former. MEC occasionally displays morphological variations with a minimum or complete absence of more typical morphological features. The presence of clear cells, a focal spindle-cell pattern, sebaceous-like differentiation, areas mimicking thyroid follicles, a predominantly oncocytic appearance and an intense sclerosing pattern may complicate the diagnosis.1–4

What distinguishes the sclerosing variant of a MEC from the other variants is a dense, hyalinised, sclerotic tumour stroma that surrounds, compresses and sometimes even obliterates the nests of tumour cells. Since not many cases have been reported, its behaviour is yet to be determined. The sclerosis associated with these tumours may overshadow the typical histopathological features and result in diagnostic confusion.2,5

We report the case of a sclerosing mucoepidermoid carcinoma (SMEC) that was diagnosed in a 32-year-old male and include a brief review of the literature.

Case Report

A male patient aged 32 years reported to a private hospital with the chief complaint of an asymptomatic swelling over the right parotid region for the previous 2 years and 6 months. On clinical examination, a multilobulated swelling of the right parotid region was noted; it measured approximately 6 x 8 cm with a slight erythema of the overlying skin. The swelling also caused a lifting of the ear lobe [Figure 1]. Palpation of the swelling showed that it was firm in consistency and fixity to the deeper tissues. No lymphadenopathy was present on clinical examination and the facial nerve function was not altered. The results of routine blood tests were within normal limits.

The investigations performed prior to an incisional...
biopsy included fine needle aspiration cytology (FNAC) and a computed tomography (CT) scan. The FNAC findings were inconclusive due to the paucity of cells. The CT scan revealed a well-defined soft-tissue density lesion [Figure 2]. A provisional diagnosis of a benign salivary gland tumour was considered due to the lack of adenopathy, a lack of nerve dysfunction, the CT findings and the duration of the tumour mass.

An incisional biopsy of the tumour was performed under local anaesthesia. This procedure was done prior to surgery to provide an accurate histological diagnosis. Gross examination revealed a specimen measuring around 4.5 x 3.0 x 2.5 cm, grayish-white in colour and of a very firm consistency.

The histopathological haematoxylin and eosin stained sections revealed a tumour mass consisting of mucous and epidermoid cells forming microcysts in a dense fibrinous stroma. The mucous cells were large, pale, columnar to polygonal in shape and seen to be lining the cystic areas. Epidermoid cells were formed solid masses in a few other areas. Several darkly-stained intermediate cells were also seen. Throughout the tumour mass connective tissue stroma was noted which consisted of dense hyalinised fibrous tissue made up of thick collagen fibres encircling the cellular nests and islands with scant inflammatory infiltrate [Figure 3]. A diagnosis of SMEC was made.

Following an incisional biopsy, a superficial parotidectomy was performed on the patient under general anaesthesia in consideration of the lack of facial nerve involvement and the absence of both fixity and lymphadenopathy. The tumour was completely excised with negative margins. A modified Blair incision was used to raise the skin flap covering the gland at face-lift level, i.e. in the layer of fat between the skin and the gland beyond the apparent margin of the tumour. The facial nerve was identified at the proximal end as it emerged from the stylomastoid foramen before entering the substance of the gland. All the salivary tissue superficial to the facial nerve was removed and the skin flap was closed in layers. The patient continues to be on routine six-month follow-up and has remained disease free to date [Figure 4]. The facial nerve function has remained unaffected.

Discussion

SMEC was first reported in 1987 by Chan and Saw, who described a case of parotid involvement. The distinctive feature of the SMEC is an extreme sclerotic stroma that is present in the tumour mass. The sclerosis associated with these tumours may be so intense that it can confuse even experienced pathologists. Extensive desmoplastic stroma is observed in many salivary gland tumours like the pleomorphic adenoma and the carcinoma ex-pleomorphic adenoma, but is not commonly seen in the MEC. It is also seen in inflammatory salivary gland disease such as chronic
The present case of SMEC that was diagnosed in a 32-year-old male was found to have unique histological features, causing its recognition and diagnosis to be challenging. Moreover, in view of both its distinctive pathology and its rarity, no clear treatment strategy has been formulated. It was treated by superficial parotidectomy. The patient is on long-term review, having undergone clinical and ultrasonographic evaluation for the past six years and the prognosis has so far been favourable.

**References**


