

# True Carcinosarcoma of the Parotid Gland

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**Abstract**

True malignant mixed tumours (carcinosarcoma) of the salivary gland origin are very rare and demonstrate both malignant epithelial and stromal components. We report a case of parotid gland carcinosarcoma which showed foci of squamous cell carcinoma and chondrosarcoma without a clinical or histological evidence of pre-existing pleomorphic adenoma.

**Key Words**

Carcinosarcoma, Salivary glands, Myoepithelial cells

**Introduction**

The malignant mixed tumours of parotid gland can be of two types :

- (i) arising from the pre-existing benign mixed tumours (carcinoma ex-pleomorphic adenoma).
- (ii) Carcinosarcoma or true malignant mixed tumour. The carcinoma ex-pleomorphic adenoma accounts for well over 95% of all malignant mixed tumours of the parotid (1,2). The true malignant mixed tumour is composed of both carcinomatous and sarcomatous elements and both these elements are capable of metastasis. This type of mixed malignant tumour is very rare and till date only 60 cases have been reported in the literature. We report a rare, true malignant mixed tumour of parotid along with review of literature.

**Case Report**

A sixty-two year old female presented with history of rapidly increasing left parotid region swelling since

one month. The fine needle aspiration cytology (FNAC) was performed and was reported as suggestive of a malignant mesenchymal lesion. Patient underwent a total parotidectomy, the specimen received, measured 3.5 × 1.5 × 1 cms, it had a bosselated appearance, whitish in colour and firm in consistency. Cut section showed whitish gelatinous areas. Routine paraffin sections were processed from the tumour and cut at 4-5 μ thickness and stained with hematoxyllin and eosin. Microscopy showed two very distinct malignant components. The epithelial component consisted of small fragments of moderately differentiated squamous cell carcinoma (Fig 1). The sarcomatous component consisted of a well differentiated chondrosarcoma showing malignant chondrocytes (Fig 2). Multiple sections from different areas of the tumour did not show any pre-existing pleomorphic adenoma.

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Fig. 1. Photomicrograph showing clusters of malignant squamous cells (arrows) lying in loose chondromyxoid stroma (x-100).

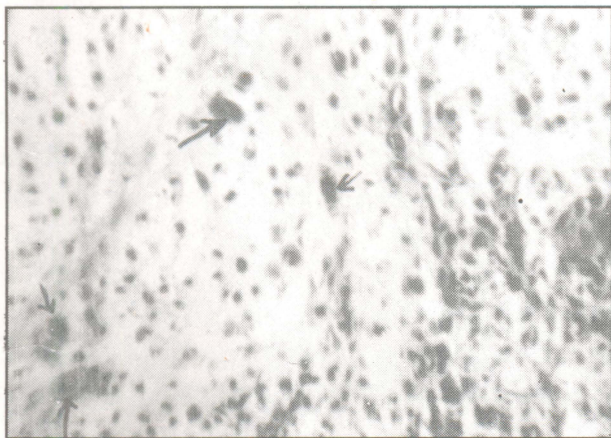


Fig. 2. Photomicrograph showing malignant chondrocytes (arrows) (x 400)

## Discussion

The true malignant mixed tumour of the salivary gland is a neoplasm composed of distinct bimodal population of malignant epithelial and sarcomatous elements. The rare nature of the tumour can be gauged from the fact that its reported incidence in various series ranges from just 0.05% to 0.16% of all malignant salivary gland tumours (3). Only 60 cases have been reported in the world literature so far (1). A large majority of these neoplasms occur in parotid gland. The sarcomatous

elements are predominant in majority of the cases, with chondrosarcoma being the most common, followed by osteosarcoma, fibrosarcoma, malignant fibrous histiocytoma (MFH) and rhabdomyosarcoma (1).

Our case was a 62 year old female who presented with a rapidly increasing solid lesion of one month duration involving the parotid gland. Histology showed an admixture of a chondrosarcoma and a squamous cell carcinoma.

The histogenesis of the malignant mixed tumour has been under debate for many years and it has been thought that the origin of salivary gland carcinosarcoma and pleomorphic adenoma could be from the common precursor cells (4). The myoepithelial cells with their hybrid epithelial and mesenchymal ultrastructural and functional phenotype have been thought to be the cell of origin for both the types of lesions (4). In the various studies reported in the literature, the immunohistochemical findings have suggested that the myoepithelial cell is the major precursor cell in the development of malignant mixed tumours and pleomorphic adenoma (5).

## References

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