

Primary Squamous Cell Carcinoma of Parotid Gland: A Rare Aggressive Malignancy

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Abstract: Primary squamous cell carcinoma of parotid gland is a rare aggressive malignancy. Detailed clinical and histological examination is necessary to differentiate this tumour from metastatic squamous cell carcinoma and other primary malignancies of parotid. We present a case of 55 year old male with primary squamous cell carcinoma of parotid. 80% of these tumours arise in the parotid gland and 20% in the submandibular gland.

Keywords: Parotid tumours, Squamous cell carcinoma.

I. Introduction

Squamous cell carcinoma arising de novo from parotid gland is rare malignancy comprising less than 1% of all salivary gland neoplasms.⁽¹⁾ More commonly it is metastatic to the intraparotid and periparotid lymph nodes from ipsilateral cutaneous malignancy of the face and scalp.⁽²⁾ Metastatic cancer accounts for less than 10% all malignancies found in parotid gland.

II. Case Report

A 55 year old non-smoker presented with painless mass, with increasing in size in parotid since 6 months. No history of cough, haemoptysis, hoarseness of voice or any lesions on skin of scalp, head and neck. FNAC from lesion showed few clusters of atypical squamoid cells having dense eosinophilic cytoplasm, raised N:C ratio and anisonucleosis. A diagnosis of carcinoma with squamoid differentiation as made. USG showed a lobulated hypo echoic lesion measuring 4x3cm in relation to parotid. CT scan revealed a heterogenous mass lesion infiltrating both deep and superficial lobes of parotid gland. Chest X-ray and other lab investigations are non specific. Patient underwent radical parotidectomy with lymph node dissection. On gross examination we received parotidectomy specimen along with 4 lymph nodes, the specimen measuring 6x4 cm. Cut surface was tan white, solid with foci of necrosis and haemorrhage (Fig 1). Microscopically tumour was composed of single population of moderately differentiated malignant squamous cells in nests and sheets with desmoplastic stroma. Tumour cells showing increase in N:C ratio, anisonucleosis, moderate amount of cytoplasm and evidence of keratinisation (Fig 2). All 4 lymph showed tumour infiltration. Sections stained with periodic acid-Schiff stain were negative. With no other demonstrable primary source of origin a final diagnosis of primary squamous cell carcinoma of parotid gland was made.



Figure 1: On gross examination cut surface was tan white, solid with foci of necrosis and haemorrhage

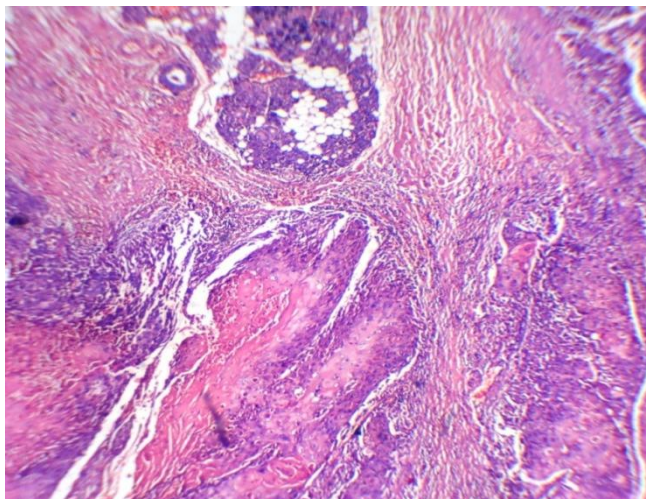


Figure 2: Microscopically tumour was composed of single population of moderately differentiated malignant squamous cells in nests and sheets with desmoplastic stroma

III. Discussion

Primary squamous cell carcinoma of salivary glands has been defined by WHO as ‘A primary malignant epithelial tumour composed of epidermoid cells, which produce keratin and/or demonstrate intercellular bridges by light microscopy. The mean age of presentation at 64 years. The male-to-female ratio is approximately 2:1. Patients typically present in an advanced stage with rapidly enlarging mass around the angle of mandible accompanied by cervical lymphadenopathy and facial nerve involvement.⁽³⁾ Grossly these are solid, firm to hard, tan white tumours with infiltrative margins with foci of necrosis. Histopathologically, most tumours are moderately to well differentiated squamous cell carcinomas with desmoplastic stroma and evidence of perineural invasion or soft tissue extension. Even though some cells may appear hydropic at times, intracellular mucin is absent and mucin stains are negative. Squamous metaplasia and dysplasia of adjacent salivary ducts are a common associated finding. Since these tumours are high grade aggressive malignancies, concurrent cervical and intraparotid lymph node metastasis are frequently observed.⁽³⁾ On electron microscopy, the malignant cells demonstrate numerous cytoplasmic processes and well-developed desmosomes. Majority of the cells contain intermediate filaments in their cytoplasm while secretory granules are absent. It must also be distinguished from mucoepidermoid carcinoma as it is typically composed of a variable cell population, including mucocytes, basaloid, and intermediate cells, in addition to epidermoid cells and may exhibit cystic areas and focal clear cell differentiation and prominent keratinisation is absent which is distinct feature of squamous cell carcinoma. Histochemical stains for intracellular mucin to rule out high-grade mucoepidermoid carcinoma are recommended before making a definitive diagnosis of PSCC.⁽⁴⁾ Age more than 60 years, ulceration, deep fixation, facial nerve involvement and cervical lymph node metastasis are significantly associated with poor prognosis.^(5 6 7) The treatment of choice is radical surgery but radiation therapy is also effective.⁽⁸⁾ In spite of adequate therapy 5-year survival rate remains approximately at 25–30%.

IV. Conclusion

Primary squamous cell carcinoma of salivary gland is a rare and aggressive type of carcinoma with poor prognosis. It has to be distinguished from other carcinoma of salivary gland with squamous component for definitive diagnosis to assess prognosis.

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