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GIANT MUCOEPIDERMOID CARCINOMA OF PAROTID WITH ATYPICAL PRESENTATION

General Surgery

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ABSTRACT

Though mucoepidermoid carcinoma is the commonest salivary gland malignancy, it is an uncommon tumour, overall. The three prominent cell types are mucous cells, epidermoid cells and intermediate cells. Most grow to sizes between 1.5 to 5 cm but we present a patient whose lesion reached 17cm in greatest diameter, and, had a course punctuated by recurrent regrowth of the tumour after discharge of sero-sanguineous contents from a punctum-like lesion on its surface.

KEYWORDS

MRI – Magnetic Resonance Imaging, CT – Computed Tomography, MEC – Mucoepidermoid Carcinoma

INTRODUCTION:

Mucoepidermoid carcinoma is an epithelial salivary gland neoplasm accounting for less than 3% of all head and neck tumors. Around two-thirds arise within the parotid gland, and the rest in the smaller salivary glands. The tumour most frequently afflicts adults in their 5th and 6th decades. The lesions arise from ductal tissue and are composed of three types of cells - mucous, epidermoid and intermediate, and are of low, medium and high grade in aggressiveness.

Case History:

A 47-year-old male patient presented with a rather large swelling over the left parotid region, extending into the neck. The mass originated 13 years back and slowly progressed to its present size. During this course there were recurrent episodes of sero-sanguineous discharge from a punctum-like opening on its surface; this led to significant reduction in size of the mass but was followed by restitution to original size within the next few days to weeks. There was no fever or purulent discharge. No significant associated symptoms like pain, numbness or trismus, ever occurred. At presentation, size of the ellipsoid lump in the left parotid region was 17cm x 10cm x 5cm; the left pinna was displaced upwards by the lump. The overlying skin was normal except for the presence of a punctum-like opening on the antero-lateral aspect, and two areas where the skin appeared thinned-out by the pressure of the lesion. Local temperature over the lump was not raised; margins were well defined, the surface smooth but lobulated, and the consistency variegated, with firm, and apparently cystic, components. The swelling was not fixed to underlying muscle or bone, but mobility was restricted, as expected for a parotid mass. No significant abnormality was noted in the blood reports. MRI showed a large thick-walled cystic lesion with thick peripheral post-contrast enhancement with a non-enhancing central area, suggestive of a cystic parotid neoplasm.

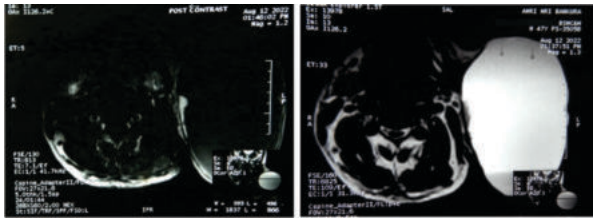

Fig. 1: MRI T1 and T2 phase showing the neoplastic lesion

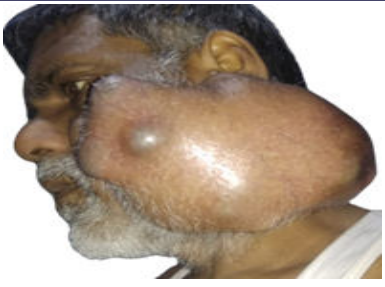

Fig.2: Showing the lesion with punctum on its anterolateral surface

Operative Procedure:

Excision was carried out through an elliptical incision designed to remove redundant skin and areas thinned out by chronic pressure. Partial parotidectomy was done, aided by formation of a tissue plane due to expansion of the mass without any major, macroscopic infiltration. The patient recovered uneventfully, with a well-healed linear scar. Post operative specimen histopathology showed multiple cell nests in mucin pool, containing intermediate cells, mucous cells and epidermoid cells, suggestive off high grade mucoepidermoid carcinoma of parotid gland.

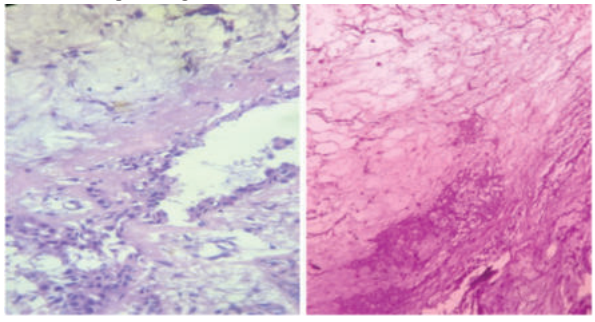

Fig. 3: Showing mucus cells, epidermoid cells and intermediate cells

DISCUSSION:

Mucoepidermoid carcinoma (MEC) is one of the most biologically diverse head and neck tumors in terms of histological grading. MECs are seen throughout adult age, with most occurring between 35-65 years, as in our case. They account for 1-10% of all major salivary gland tumors and 6.5-41% of minor salivary gland tumors, most frequently arising in the parotid gland followed by the hard palate.[1] There is a slight female preponderance.[2]

MECs of the parotid have three distinct cell types constituents – 1) intermediate cells which predominate 2) mucous cells and 3) epidermoid(squamous) cells; grading may be low, intermediate and high grade. Low-grade tumors are well-differentiated and consist of mostly mucous cells and epidermoid cells. Intermediate type has intermediate features and high-grade tumors have poorly differentiated cellular pleomorphism, high proportion of squamous cells and solid-cystic components.[3]

Clinical diagnosis of MEC may be difficult due to variability of clinical presentation. It may grow as a fixed, painless but rapidly growing swelling. Sometimes tenderness, trismus or localised numbness may be present although spontaneous rupture of tumour with discharge from punctum has been rarely reported. Median tumor size in cases of mucoepidermoid carcinoma is generally 2.5 cm (range 1.5 – 5 cm). Some large tumors have been reported to have size up to 7 cm, so our case is a very, very unusual exception.[4]

Radiographically evaluated can be done via ultrasound, CT scan or MRI. Ultrasound and CT usually show a well-circumscribed cystic lesion On MRI, T1 and T2 intensity variations may predict histological grading of the tumour.

Treatment of MEC is surgical resection with goal of disease-free margins.[5] Post-operative radiotherapy is recommended in cases of advanced stage, high-grade tumour, peri-neural or lympho-vascular invasion, close or positive resection margins, extra-parotid extension or lymph node involvement.[6] The use of chemo-radiation is associated with significantly better local control but with no difference in the overall survival compared to patients receiving radiotherapy alone.[7] so chemotherapy is mainly considered for palliation.

CONCLUSION:

MECs are relatively uncommon salivary neoplasms. Our case represents an even more atypical presentation, in being very slow growing, attaining relatively gigantic proportions and having a course punctuated by recurrent discharge of contents, followed by re-growth. This adds to existing knowledge on the presentation of these uncommon lesions.

Ethics approval:

Appropriate ethics approval was obtained from the Institutional Ethics Committee.

Consent:

Consent to participate: Informed consent was obtained from the patient.

Consent to publish: The participant has consented to the submission of the case report to the journal

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