

# Case Report: the management of a central mucoepidermoid tumour

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## ABSTRACT

A central mucoepidermoid (CMC) tumour is considered a relatively rare, malignant salivary gland tumour which can affect the oral cavity. Many cases present radiographically as cystic-like, radiolucent lesions with possible corticated margins. The treatment modality of choice is through a surgical approach to management; including wide local excision or block resection of the localized involved bone. Patients generally exhibit a reasonable prognosis, however long-term follow-up is advised for careful monitoring, to identify the risk of recurrence. This case report will discuss a patient who was referred into the oral and maxillofacial surgery (OMFS) department by his general dental practitioner (GDP) following an incidental presentation on an Orthopanthogram (OPG) radiographic film (see Figure 1). Here, we will review the relevant literature surrounding the aetiology of a CMC. We will also discuss the diagnosis and management of radiolucent lesions which may present in the oral cavity.

## INTRODUCTION

A 60-year-old male patient was referred to the OMFS department with the sole complaint of a 'lump' like swelling in the left cheek. His dental practitioner obtained a radiograph which showed opacity in the left mandibular ramus region. The identification of pathological lesions in the oral cavity of the present as radiolucency on a radiographic film. The patient complained of this 'lump' gradually increasing in size over the last four to six years. This patient was otherwise fit and well with no known allergies. The patient was a non-smoker and consumed a total of approximately five units of alcohol per week. On clinical examination, the patient presented with a firm expansion in the buccal aspect of the left mandible. On intra-oral examination, the lower left first molar (LL6) tooth was a retained root which presented with an adjacent buccal sinus. The lower left second molar (LL7) tooth was grade three mobile.

Following the initial examination and clinical presentation, an urgent computerised tomography (CT) image was obtained. The working differential diagnosis being an odontogenic keratocyst (OKC) or ameloblastoma. The patient was listed for an urgent theatre session for the removal of the compromised LL6 and LL7 teeth as well as the incisional biopsy of the cystic lesion in the left body/ramus of the mandible.

## METHODS

Treatment was carried out under a general anaesthetic (GA). A minor oral surgical approach to treatment was conducted through a single sided mucoperiosteal flap. A curved surgical clip was used to remove the cystic contents associated with the surgical site and sent for histopathological analysis. The patient was provided a course of broad-spectrum oral antibiotics (co-amoxiclav 625mg; amoxicillin 500mg and

clavulanic acid 125mg) and topical mouthwash (chlorhexidine 0.2%) for seven days following the procedure.

Histopathology results discussed fragments of a multi-locular cyst. The wall of the cyst lining is composed of dense fibrous tissue and initially the conclusion reported features in keeping with a glandular odontogenic cyst (sialo-odontogenic cyst). However, a further supplementary report following external histopathological analysis of the sample described the likelihood of a central mucoepidermoid carcinoma with a solid and multicystic growth pattern, with features not in keeping with a simple glandular odontogenic cyst. Further Interphase FISH (Interphase Chromosome Flow-FISH) sampling confirmed this diagnosis.

Following this confirmed diagnosis management included a further GA for decompression of the cyst, as seen on further radiographic imaging (Figure 2). Two nasopharyngeal tubes were sutured into position to assist with marsupialisation and drainage. A further cover plate was manufactured over the defect site.

Follow-up included further radiographic films which continued to monitor the radiolucent appearance in the lower left quadrant (see Figure 3).

This patient was referred to Royal Preston Hospital for further follow-up and management, which may involve a more radical surgical intervention.

## DISCUSSION

The mucoepidermoid carcinoma (MEC) is classified as a 'malignant neoplasm' as per the World Health Organization (WHO).<sup>1</sup> At the current time, it is considered to be one of the most commonly malignant neoplasms of epithelial origin in the salivary; with the majority presenting in association with the parotid gland. The CMC presents most commonly in females and in the mandibular region.<sup>2</sup> In 10% of cases death can occur.<sup>3</sup> Initial presentation is often innocuous, in the form of a small area of mucosal ulceration or a painless firm lump slowly growing in one aspect of the mouth.<sup>3</sup> The hard palate is the most common site for the minor salivary gland tumour to develop.<sup>4</sup>

Diagnosis of MECs is best done through imaging with a magnetic resonance image (MRI) or CT scan, and testing with fine needle aspiration cytology (FNAC).<sup>5</sup> Ultrasound imaging is the gold standard for diagnosis of tumours in the parotid gland but where lesions arise in deeper tissues or minor salivary glands, an MRI is required to assess the extent, perineural spread and local invasion of the tumour.<sup>5</sup> Development of MECs is not linked to common tumour risk factors such as smoking and alcohol consumption.<sup>6</sup>

## CONCLUSION

Complete and full excision of MECs is required to prevent recurrence. Prompt imaging is important in cases where

malignancies are suspected to ensure that definitive treatment can be carried out as soon as possible. This is crucial because insidious cystic growth can mean that there is a delay in presentation of patients during which time the cysts are well developed. OMFS departments rely on referrals from general dental practitioners and a six-year history of buccal swelling should not be ignored, especially when plain intra oral dental radiographic imaging is readily available to identify bony pathology and anomalies. Whilst MECs are more commonly seen in women, it is important that the differential diagnosis is not dismissed when men present with similar symptoms. MECs more commonly present within the third to sixth decade, which was the case for this patient.<sup>3</sup>

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Figure 1: OPG dated 22/03/2022: corticated appearance in the lower left quadrant. The LL6 roots present with apical radiolucency extending into the furcation. The apices of the LL7 roots are resorbed.

Figure 2: decompression via the placement of nasopharyngeal tube in the lower left quadrant.



Figure 3: OPG obtained 25/01/2023 with marked increased bony infiltration in the lower left quadrant.