An Unusual Dentigerous Cyst

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Introduction

Dentigerous cysts are the most common non-inflammatory cysts of the jaw, accounting for over 24%[1]. They are usually associated with impacted mandibular third molars and maxillary canines. They are commonly incidental findings due to their asymptomatic nature, however they may grow considerably resulting in cortical expansion[2]. Radiographically, dentigerous cysts are typically unilocular and well circumscribed. Their sizes vary and histopathological confirmation may be required to differentiate small dentigerous cysts from large dental follicles.

Presentation

A 55-year-old male was referred urgently to the Oral Surgery department by his dentist regarding a non-resolving, right sided extra-oral swelling. The patient reported a penicillin allergy and was otherwise medically fit and well and a non-smoker.

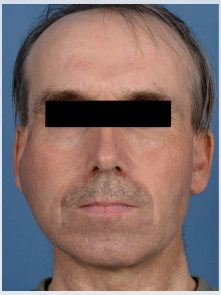

Figure 1 *– significant facial asymmetry.*

On examination, there was significant asymmetry due to a firm facial swelling over the right parotid region, extending towards the zygoma, tragus and angle of the mandible. Intra-orally, there was soft tissue swelling associated with the mandibular right quadrant (Figure 2). Periodontal probing produced a straw coloured discharge.

Figure 2 *– soft tissue swelling of the mandibular right quadrant*

Special Investigations

Initial ultrasound imaging was undertaken to rule out a parotid mass or obstruction (Figure 3).

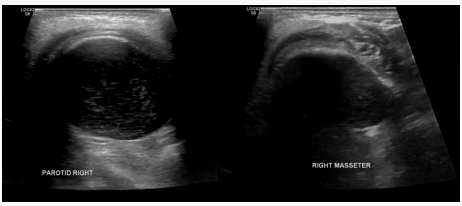

Figure 3 *– Ultrasound demonstrating a hypoechoic, avascular, well defined lesion deep to the masseter and accessory parotid gland. Evidence of cortical bony expansion and posterior enhancement, suggestive of a cyst within the ramus.*

A subsequent sectional panoramic radiograph revealed a multilocular radiolucency in the right posterior mandible, extending from the angle to the coronoid process (Figure 4).

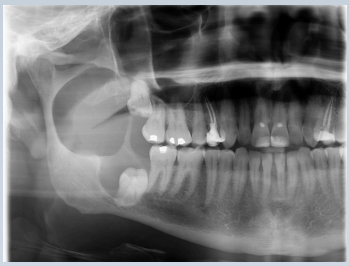

Figure 4 *– multilocular radiolucency, mandibular right third molar is unerupted and displaced inferiorly. The path of the right Inferior Dental Canal is unclear. The superior locule is more radiolucent, suggesting perforation of one or both of the cortices.*

Further CBCT imaging demonstrated the expansive nature of the lesion (Figure 5, 6). A sample sent for histopathological assessment showed features consistent with a dentigerous cyst.

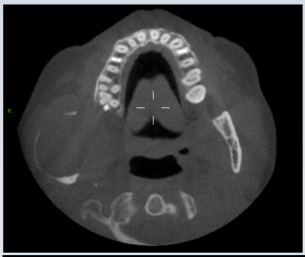

Figure 5 *– Axial view showing cortical expansion and perforation at the level of the right mandibular foramen.*

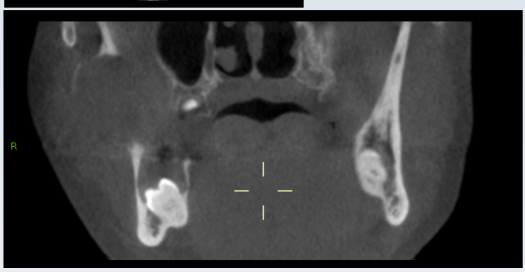

Figure 6 *– Coronal view demonstrating the mandibular right third molar being displaced inferiorly with the radiolucency extending to the Cemento-enamel junction.*

Discussion

Given the expansile and multilocular nature of the lesion, differential diagnoses of Ameloblastoma and Odontogenic Keratocyst were initially considered. Initial histopathology reported presence of goblet cells. Metastatic change of the dentigerous cyst to a mucoepidermoid carcinoma was also suspected due to its significant size, but ruled out following molecular testing. The patient was referred on to a tertiary Oral & Maxillofacial Unit for safe management, due to significant risk of pathological mandibular fracture.

Marsupialization through suturing a nasopharyngeal tube flange (1cm) into the cystic cavity and extraction of the right mandibular third molar were complete under general anaesthesia and recovery was uneventful. The patient was discharged with a 7-day course of Clindamycin and provided with instructions on diet and oral care. This case highlights the importance of a multidisciplinary approach to diagnosis and management of large multilocular lesions as, initially, they can be deceptive.

Acknowledgements

C Goodall, Senior Clinical Lecturer/Honorary Consultant in Oral Surgery & P McAllister, Consultant in Oral and Maxillofacial Surgery

References

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