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CASE STUDY

ODONTOGENIC KERATOCYST IN THE MAXILLARY SINUS

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ABSTRACT

Odontogenic Keratocyst (OKC) are defined as epithelial cell lined cysts. Most of these Odontogenic cyst are defined by their history. (OKC) is an entity from the Odontogenicist, have potential Aggressive behavior and high tendency of recurrence together with defined histopathological features. This article reports a (OKC) in the maxillary sinus. This cyst occurs less than 1% in the maxillary sinus of all cases. The lesion was diagnosed based on histopathological and radiological feature, Treatment was surgically and no recurrence has been observed on follow up.

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INTRODUCTION

A keratocystic odontogenic cyst (also keratocystic odontogenic tumor) is a rare and benign but locally aggressive developmental cystic neoplasm. It most often affects the posterior mandible. They arise from the Remnants of dental lamina and associated with impacted teeth. Multiple odontogenic keratocysts are a feature of nevoid basal cell carcinoma syndrome. Pindborg, Phillipsen and Henriksen established strict histologic criteria for the diagnosis of an odontogenic keratocyst (OKC). These criteria include an epithelial lining that is usually thin and uniform in thickness, with little or no evidence of rete ridges; a well-defined basal cell layer, the component cells of which are cuboidal or columnar in shape and often fashioned in a palisaded arrangement; a thin, spinous cell layer which often shows a direct transition from the basal cell layer. Treatment options includes, Wide (local) surgical excision, Marsupialization the surgical opening of the (OKC) cavity and a creation of a marsupial like pouch, so that the cavity is in contact with the outside for an extended period, e.g. three months, Curettage (simple excision & scrape-out of cavity), Peripheral osteotomy after curettage and/or enucleation. Simple excision, Carnoy's solution - usually used in conjunction with excision, Enucleation and cryotherapy.

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Case report

17 years old Male patient presented with a chief complain of right side facial swelling associated with pain and right-sided nasal obstruction. The patient reported one year of evolution with significant increase in the last eight months. History of aspiration was done locally nine months ago, no medical reports were mentioned. Oral examination showed bulging of the hard palate right side with discoloration of the mucosa, intact tooth, with remarkable mass. Buccal vestibule was obliterated, Externally 5*5 cm soft facial mass, defect of facial nerve on Right side was rolled out (Figure 1). Computer tomography bone window axial, lateral and coronal section showed discrete opaque mass of the right molar of the maxilla totally confined into the sinus cavity without oral involvement and with remodeling of inferior, medial and anterior walls of the sinus (Figure 2). The lesion was enucleated through a Caldwell luc procedure (Figure 3).

Friable tissue was removed along with bone fragment of the alveolar bone, impacted tooth in the inferior wall was found and removed, curette and widening of the maxillary sinus ostium was done through a limited FESS. Histopathological examination shows a cyst lined by stratified squamous epithelium with orthokeratin and parakeratin. The patient went through a smooth recovery. Follow up for one and a half year, Shows no sign of recurrence.



Figure 1. External examination showed bulging of the hard palate right side with discoloration of the mucosa, intact tooth, with intact facial nerve

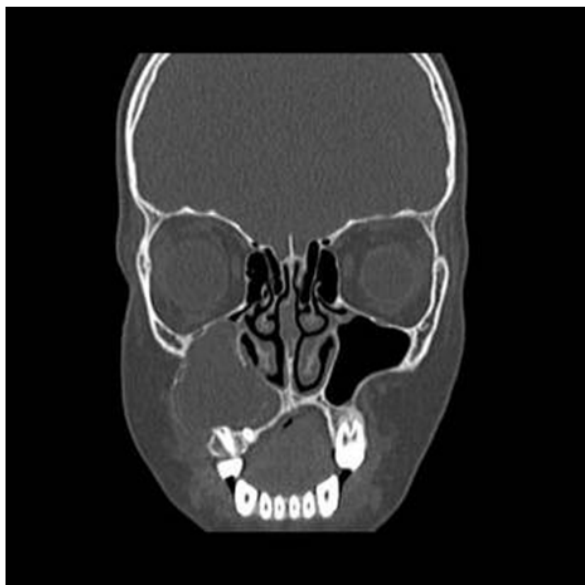


Figure 2. Coronal computerized tomography delineated an hypodense spherical lesion in the right maxilla



Figure 3. Intraoperative enucleated through a Caldwell Luc procedure

DISCUSSION

The OKC has a predilection for men, occurs more in the mandible posterior region. It seems that less than 1% of all

cases of OKC completely restricted in the maxillary sinus without alveolar bone or erupted teeth association, while most of the cases reported involved the bone. Histological diagnosis, is usually made by a cyst which is lined by stratified squamous epithelium which is capable of producing orthokeratin and parakeratin. Commonly both types of keratin are commonly produced. The lumen of these cyst commonly give rise to daughter cyst, our patient had none. Various treatments are there based on surgical approaches such as: marsupialization, anycilation, cryotherapy, curettage and Caldwell luc. These cysts must be completely removed to prevent recurrence. Recurrence is 0% to 60% depending on treatment options and follow-up period. In our case the patient was treated with enucleation and curettage, no recurrency was found during the period of the follow-up. When associated with hypertelorism, mid-face hypoplasia, relative frontal bossing and prognathism, mental retardation, schizophrenia, multiple basal cell carcinoma, calcification of the falx cerebri, bifid ribs, palmar pitting, basal cell nervous syndrome showed be ruled out. In conclusion, OKC is an aggressive lesion with high recurrency rate. Ideally a biopsy specimen examination together with clinical and radiographical appearances will make the diagnosis. Surgery make the most effective treatment in order to avoid recurrency.

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