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Mucosal Inclusion Cyst of The Maxillary Sinus: A Caldwell Luc Approach

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ABSTRACT

Mucosal inclusion cysts are the most common incidental finding of maxillary sinus imaging. In the case report the authors describe a classical case of mucosal inclusion cyst of the maxillary sinus which was exposed via Caldwell Luc approach with complete visualisation of the cystic lesion followed by in toto extirpation thus preventing any possibility of recurrence. The authors also preserved the buccal bony wall further helping to minimise any patient morbidity.

Keywords: *Mucosal inclusion cyst, Maxillary sinus, Caldwell Luc approach*

Introduction

Amongst the most frequent and incidental finding of maxillary sinus imaging are mucosal inclusion cysts. Mucosal inclusion cysts are believed to originate from obstruction of duct of seromucinous gland [1]. Although mostly asymptomatic they can be associated with symptoms such as headache, nasal discharge and postnasal drip [2,3,4]. In this case report the authors describe a classic case of mucosal inclusion cyst in the maxillary sinus which was removed in toto via Caldwell Luc approach.

Case Report

A 30-year-old male patient presented to Dept of Oral & Maxillofacial Surgery with pain in the right side of the face. On clinical evaluation there was no swelling or tenderness noted either intraorally or extraorally. The patient also reported no history of trauma to the associated area. A CT scan was done which revealed a well-defined, homogenous radiopaque lesion occupying the lower 1/3rd of the maxillary sinus (Figure 1). A FNAC was done yielding a diagnosis of maxillary cystic lesion. Enucleation the cyst via Caldwell Luc approach was planned. Under general anesthesia, an incision was given around 3mm above the line of reflection and running parallel to the occlusal line. A mucoperiosteal flap was raised taking care not to damage the infraorbital nerve. A 1.5 cm diameter window was delineated in the buccal wall of the maxillary sinus. After careful delineation of the borders, the bony wall was infractured taking care not to perforate the maxillary sinus lining. After superior retraction of the bony wall, the cyst came into view inferolaterally. A Luc's forcep was used to grasp the cystic lesion and tease it out gently (Figure 2). The cystic lesion was removed in toto and prompt hemostasis was achieved (Figure 3). The superiorly retracted bony wall was eased back to original location thus maintaining bony continuity. The specimen was sent for histopathological examination confirming a diagnosis of mucosal inclusion cyst.

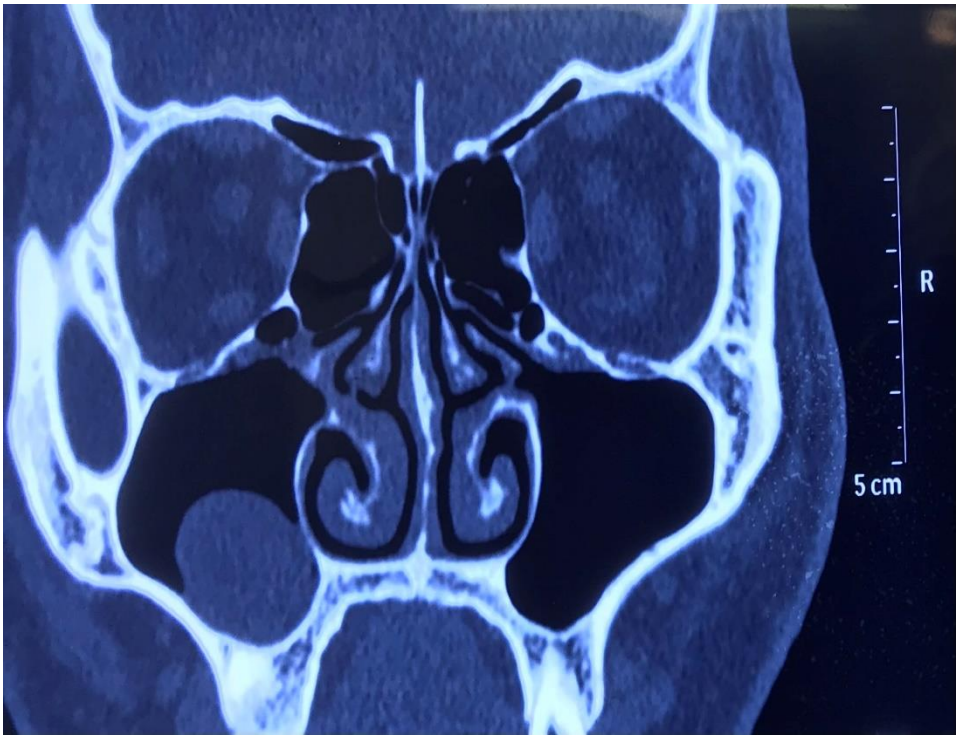

Figure 1 : The Coronal section of CT scan demonstrating the mucosal inclusion cyst

Figure 2: The mucosal inclusion cyst being teased out of the maxillary sinus

Figure 3: The cystic lesion in toto

Discussion

The aetiopathogenesis of mucosal inclusion cysts is controversial. It has been suggested that chronic rhinosinusitis plays a key role in it's development [2]. Dental infections and trauma has also been implicated as etiology for this cystic lesion. Muocal inclusion cysts are mostly asymptomatic however symptoms such as facial pain, nasal obstruction and headache have been associated with it [5,6]. Marsupiliazation and enucleation form the primary treatment modalities when dealing with a symptomatic mucosal cyst. According to the author's opinion enucleation with complete extripation of the cystic lining is mandated to prevent the possibility of recurrence.The same has validated in literature as recurrences of mucosal cysts have been found to be associated with incomplete surgical removal.

The authors used Caldwell Luc approach to create a bony window into the sinus to visualise the cyst.Traditionally Caldwell Luc has been indicated in treatment of conditions like chronic sinusitis, management of dental cysts and as well as for closure of oro-antral fistulas. Lately FESS has replaced Caldwell Luc as a primary treatment modality with the latter being used as a reserve strategy and last resort when other treatment modalities fail [7]. The complications associated with Caldwell Luc are facial edema, pain, facial asymmetry, numbness in the infraorbital nerve distribution, dacrocystistis and devitalized teeth [8].

The authors use of this treatment modality in the said case report was driven by the need for complete visualisation of the cystic lesion followed by in toto extirpation thus preventing any possibility of recurrence. The preservation of the buccal bony wall and subsequent replacement to its original position further helped minimise any patient morbidity.

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