



Maxillary Sinus Odontogenic Keratocyst- A Rare Case Report

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ABSTRACT:

Odontogenic keratocysts (OKCs) are developmental odontogenic cysts of epithelial origin. OKCs was first identified in 1876 and further characterized by Phillipsen in 1956.^[1] OKC has a important mention in the field of oral and maxillofacial surgery due to its high recurrence rate^[2].

OKC's arise from the remnants of the dental lamina. It can occur in isolation or as a multitude of cysts which are linked to syndromes such as Gorlin–Galtz. OKC's may be regarded as a benign neoplasm rather than a conventional cyst^[3]. The most occurrence site of OKC is the mandible (73%) compared with 27% in the maxilla^[4]. Maxillary odontogenic keratocyst is rare and accounts less than 1% of the total OKC cases reported in the literature.^[5] Considering their aggressive behaviour, varying origin, unusual development, discrimination treatment modalities, and especially its high recurrence rate, OKCs have been a subject of interest for various oral surgeons globally. Hereby presented a case which outlines the management and findings of a solitary OKC in relation to left posterior maxilla region involving left maxillary sinus and its importance in diagnosing the cyst earlier for achieving best outcomes.

CASE REPORT

PRESENTING COMPLAINTS & SALIENT PHYSICAL FINDINGS:

Patient reported to the Department of Oral and Maxillofacial Surgery with history of pain and swelling in left posterior upper back tooth region for past 6 months. Patient was apparently normal before 6 months after which she developed localised pain and swelling over left upper back tooth region. The swelling was slow growing and attained the present size and associated with pain. The pain was intermittent, nocturnal and dull type with no aggravating and reliving factors. On examination patient was conscious, stable and oriented.

Extraoral examination revealed no gross facial deformity, lateral movements of Temporomandibular joint are normal and no palpable lymph nodes.

On Intra oral examination, mouth opening was adequate. Occlusion stable bilaterally (Canine occlusion). Intra-oral swelling of about 3*2 cm over left alveolar ridge region extending from 25 to 28 region anteroposteriorly, obliterating the vestibule. Upon palpation, the swelling was firm in consistency, tender, "Egg shell crackling" and buccal cortical expansion was noted. No secondary changes like pus discharge was noted.

INVESTIGATIONS:

1.General Anesthesia investigations- CBC, BT, CT, APTT, PT, INR, SEROLOGY, HBA1C, SERUM ELECTROLYTES, ECG, COVID- RTPCR,LFT, RFT, BLOOD GROUPING.

2.CBCT

3.Chest X ray

COURSE OF STAY:

During the course of stay the patient was conscious, stable and oriented. Vitals were monitored and charted. CBG was monitored 8th hourly and charted. Bowel and bladder movements were normal. After obtaining anaesthetic fitness and cardiologist opinion (for clopidrogel), patient was operated under GA. Routine Saline irrigation was done postoperatively.

Patient was administered with the following medications,

Rx

INJ AUGMENTIN 1.2g IV BD

INJ METRO 500mg IV TDS

INJ DEXA 8MG IV TDS (Tapering dose)

INJ VOVERON 75mg IM BD

INJ PAN 40 mg IV BD

Tab. Losar H Orally TDS

Tab. Clopidrogel 75mg 0-0-1 (restarted on next day of surgery as per cardiologist order)

Surgical Details:

Patient in supine position under fiberoptic intubation, right Nasotracheal intubation done. Patient prepared with 10% Povidone iodine. Patient draped sterile. 2% Lignocaine with Adrenaline in 1:2,00,000 dilution of adrenaline is given as infiltration over the vestibular region in relation to 23-28 region. Vestibular incision placed extending from 23-28 region. Mucoperiosteal flap elevated. Lesion visualized. Bony window created in left lateral wall of Maxillary sinus. Enucleation of cyst done by walling off cystic lining into. Curettage of cystic cavity done. Cauterization of cystic cavity along the inferior border was done. Peripheral Osteotomy was done using round bur over the superior, anterior and posterior border of cystic cavity. 5-Fluorouracil was used to soak the ribbon gauze and was placed in the cystic cavity and packed. Suturing was done using 3-0 Vicryland one end of ribbon gauze was left exposed to oral cavity.Pack removed on next day of surgery and closure done with 3.0 vicryl. Pressure gauze placed. GA recovery was uneventful.

CONDITION AT DISCHARGE:

Patient is stable, conscious and well oriented. Vitals are stable. Bowel and bladder movements are normal. Extra-oral dressings intact. Intraoral sutures intact. No paresthesia evident.

Patient advised to get following medications,

Rx

TAB ZERODOL P 1-0-1 for two days

TAB PAN 40 MG 1-0-1 for two days (1/2 hour before food)

ADVICE ON DISCHARGE :

- 1.To be on soft diet.
- 2.To maintain oral hygiene.
- 3.Patient to report to Department of Oral & Maxillofacial Surgery after a week for review.

DISCUSSION

Odontogenic Keratocysts (OKCs) are developmental odontogenic cysts of epithelial origin, first identified and described in 1876 and further characterized by Phillipsen in 1956. The odontogenic Keratocyst (OKC) is one of the most aggressive odontogenic cysts owing to its relatively high recurrence rate and its tendency to invade adjacent tissues^[6].

Clinical Features:

Most lesions are incidental and asymptomatic. If symptomatic, pain, swelling, and drainage are most common. Lesions of children, as well as multiple lesions, may be associated (NBCCS)^[7].

Histological features

Uniformly thin epithelium, usually six to eight cells thick, with minimal rete ridges. Artifactual clefting below epithelium. Luminal epithelial cells show corrugated refractile parakeratotic surface. Palisaded cuboidal or columnar basal cell layer. Lumen contains keratinaceous debris. Inflammation may alter the histologic features^[7].

Treatment and Prognosis:

The aggressive nature of the cyst with its parakeratinized epithelium is dealt using decompression followed by enucleation along with the involved overlying mucosa^[8].

CONCLUSION

OKC in the Maxillary sinus is a rare occurrence, and it usually does not present characteristic clinical and radiographic features. The difference between OKC and other jaw cysts is its potential Aggressive behavior and recurrence. CT imaging should be considered as the baseline radiological investigation to diagnose and plan treatment. In addition, long-term follow-up must be done to detect any recurrence associated with the lesion when it occurs in the maxillary sinus.

NOTES:

The author have declared that no competing interest exist.

HUMAN ETHICS:

Consent was obtained by the patient in this study.

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