CASE REPORT

Ectopic Molar in the Condylar Region: An Unusual Presentation

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Abstract:

Impacted third molars are very common condition which we encounter in our daily practice. Ectopic teeth are those which are impacted in unusual positions or have been displaced from their normal anatomic locations. Ectopic mandibular third molars in the condylar region are rare and under reported. Most of the cases are seen in female patients with common signs and symptoms of pain, discomfort and swelling in the mandibular region or in the preauricular region with temperomandibular joint pain and discomfort. Here we report an asymptomatic case of ectopic third molar in the condylar region and follow up of the case with Cone Beam Computed Tomography (CBCT) imaging.

Keywords: Ectopic molar, Condylar region, impacted third molar, CBCT.

Introduction

Impaction of third molar is a common condition which dental surgeon encounters. Ectopic mandibular third molars are unusual, with their heterotopic positions reported in the condylar area, in the ascending ramus of the mandible, or in the coronoid process. Ectopic teeth are those that are impacted in unusual positions, or that have been displaced and are at a distance from their normal anatomic location[1]. Exact etiology is unknown which may be as a result of developmental disturbances, pathological process or iatrogenic activities[2]. Ectopic mandibular third molars are reported more in females

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and most of the cases are reported with symptoms including pain and swelling on the ipsilateral side of mandible with trismus[3-5]. Here, we report a rare case of asymptomatic ectopic mandibular third molar in the left condylar region of male patient with follow up. CBCT findings of the case after 4 years follow up has been highlighted.

Case Report:

A 52 year old male patient reported to our department in 2018 with chief complaint of loosening of lower front teeth since 3 months. The patient's medical history showed no systemic diseases. Routine examinations were done to assist in diagnosis and treatment planning. No gross extra oral findings detected. Intra orally, generalized recession and furcation noticed with grade 1 mobility of lower anteriors. All teeth were present except 18, 27, 38 and 48. Panoramic radiograph was indicated for routine screening.

Evaluation of radiograph revealed an incidental finding. An impacted mandibular third molar was dislocated high on the left condylar region. It was aligned horizontally with the apex towards subcondylar region and crown approximately 1cm inferior to the sigmoid notch with the follicular space measuring approximately 2mm surrounding the crown of the malformed tooth (Fig. 1). Thus, the incidental radiographic finding lead to the diagnosis of ectopic mandibular third molar in the left condylar region.

The patient was informed about the finding. The possible complications of his condition and the importance of periodic diagnostic radiograph and follow up were stressed, but no treatment was performed at this time. Periodontal therapy was done for the presenting complaint.

Patient was reviewed and followed up 4 years later. Patient was asymptomatic and no relevant intra oral or extra oral findings were detected. Patient was referred for CBCT to determine the exact position and possible pathology associated with ectopically placed 38 and to evaluate the need of surgical management and possible complications of the same. The CBCT imaging was done using Planmeca ProMax 3D plus(90 KV, 8mA, voxel size 150 μm) which was housed in the Department of Oral Medicine & Radiology at Malabar Dental College & Research Centre.

CBCT showed ectopically placed 38 approximately 4.2 mm inferior to sigmoid notch and 11.2mm from the anterior border of ramus. Hypodense areas was seen on the crown. Mild enlargement of follicular space was

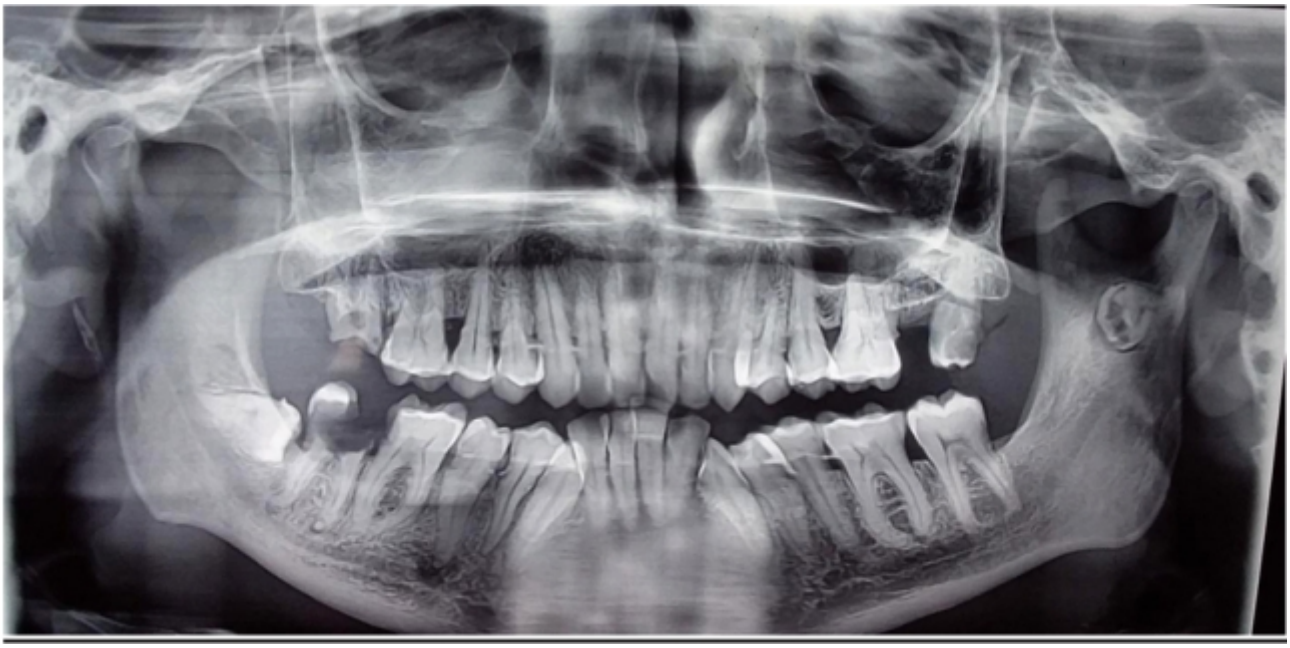

Fig 1: Panoramic image showing ectopically placed 38 in the subcondylar region of left mandible.

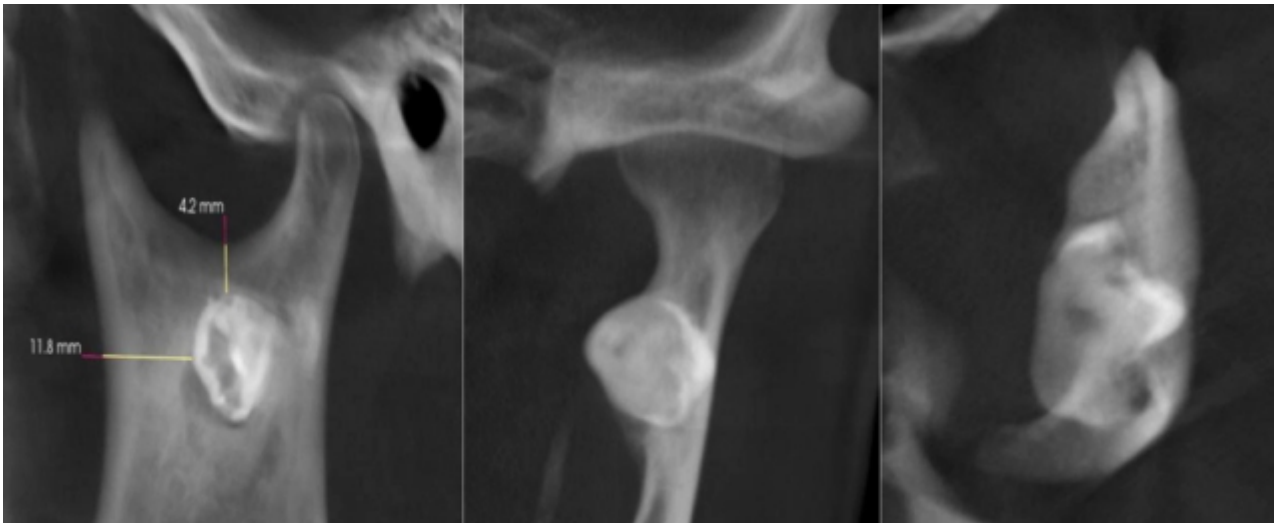

Fig 2:
CBCT Multi Planar Reconstruction images showing the ectopically placed 38. a) Sagital b) Coronal c)Axial sections

Fig 3: CBCT 3D reconstructed view of ectopically placed 38.

noted. Apical third of the root shows dilacerations (Fig 2,3).

Surgical management was not indicated after considering patient being asymptomatic and the CBCT findings.

Discussion:

Ectopic eruption of teeth in non-dental sites is rarely described and has been reported in the mandibular condyle, coronoid process, orbit, palate, nasal cavity, nasal septum, chin and the maxillary antrum[5-7]. Exact etiology of this is unknown which may be as a result of developmental disturbances, pathological process and iatrogenic activities[2].

The etiology of ectopic mandibular third molars has not clarified completely. Odontogenesis results from complex multistep interaction between the oral epithelium and the underlying mesenchymal tissue. Ectopic eruption may occur due to deviant initial position of the third molar germs or an aberrant eruption pattern[8,9]. It is also hypothesized that the cause may be due to the primary and complete dislocation of the third molar tooth base posteriorly from the muscle process during the development phase[10]. A mandibular third molar may also be displaced by a pathological process such as a cyst or a tumor. The expansion of a cyst as it develops may result in pressure on the crown of a tooth and displace it in a direction opposite to the path of eruption. Usually when a tooth is dislocated high in the condyle, a large cyst occupies the entire ramus. The cysts associated with the ectopic third molars were found to be relatively small. It may be assumed that such cysts probably was perforated which resulted in drainage and decompression[11]. Few cases of spontaneous regression of a cyst associated with an impacted third molar were also reported[12].

Most of the cases reported are with female predilection. The signs and symptoms of ectopic mandibular third molars are pain or swelling in the ipsilateral side of the mandible or in the preauricular region, trismus, temperomandibular joint pain or difficulty in mastication. For this reason , this can be included under differential diagnosis of orofacial pain and pain in the pre auricular region. The present case is a rare example of an impacted mandibular third molar in male patient that was located in the subcondylar area and was not associated with any signs or symptoms. Chongruk reported a case of impacted left third molar in the subcondylar region without any signs and symptoms in a female patient[13]. Few cases reported with ectopic bilateral mandibular third molars[3].

Imaging modality plays an important role in diagnosis and management of ectopic molars. Screening imaging with panoramic radiography aids in detection of asymptomatic cases. Three dimensional imaging including CBCT helps in surgical guidance. Exact position and type of ectopic molar, proximity to vital anatomical structures, probability of pathological fracture, whether to plan intraoral or extra oral surgical intervention to the same can be concluded with CBCT imaging[14,15].

Treatment need to be planned taking into consider the position of the ectopic tooth and the potential for trauma by the surgery. The surgical removal of an ectopic mandibular third molar with acute inflammation or cystic lesions is recommended to prevent further complications such as diffuse osteolysis, condylar process deformity, or bone absorption[11]. Association of ectopic third molar with odontogenic cysts, is present in 6.7% of cases, is an important indication for the removal of both the cyst and the tooth[16]. In cases of symptom-free highly aberrant wisdom teeth annual follow-up visits are appropriate[13]. However, infection secondary to an impacted third molar and dentigerous cyst can cause serious consequences in a patient with underlying systemic disorders.

Conclusion:

Ectopic mandibular third molars are rare. Most of the cases are associated with clinical symptoms. This can be considered for differential diagnosis of orofacial pain and pain in the pre auricular region as most of the conditions are presented with signs and symptoms. Imaging modality plays an important role in diagnosis and management of ectopic molars. In this case report, ectopic molar was done with panoramic and CBCT imaging. If symptomatic, management of such cases should be planned on the basis of the position and type of the ectopic tooth and anticipating potential trauma which could be caused by surgical intervention.

Conflict of Interest : None

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