Ectopic Mandibular Third Molars in the Ramus Region: A Report of Three Cases

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Abstract

Ectopic mandibular third molar is an uncommon condition, and the information regarding its causes and characteristics are not completely clarified.

This article aims to report three extremely rare cases of asymptomatic ectopic mandibular third molars in the ramus of the mandible which were found accidentally during regular dental treatment.

The treatment for asymptomatic impacted ectopic mandibular third molars without any pathologic related condition should be in a conservative manner without surgical intervention, but radiographic annual follow-up is indicated with monitoring for the development of any pathology.

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Introduction

Impaction is a condition in which the tooth fails to erupt in the oral cavity within an expected time[1,2,3].

Mandibular third molar impactions are common conditions and they are mostly located between the second mandibular molar and ramus of the mandible with a frequency of 20%-30%, with higher prevalence among females[4,5].

Ectopic teeth are often impacted in very unusual positions or displaced away from their usual anatomic position[6,7]. They can be deciduous, supernumerary or permanent teeth[8].

Eruption of a tooth ectopically in the oral cavity does occur often, but its eruption into other sites is very rare. Ectopic sites include mandibular condyle, ascending ramus, coronoid process, palate, maxillary antrum, nasal cavity, orbit or via the skin[9,10,11].

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Mandibular third molar impaction in an ectopic position which is displaced away from its usual anatomic position is rarely seen and very few cases have been documented in the literature and hence their etiology, clinical features and surgical management still remains unclear[4,6,7]. Unilateral as well as bilateral impacted ectopic third molar teeth have been reported in the mandibular ramus[11,12].

Most cases of ectopic third molars are asymptomatic and are routinely found during routine radiographic examinations[4-12]. Because of the uncommonness of ectopic third molars in the ramus of mandibular region, we aim to report three unusual cases of ectopic mandibular third molar teeth which were found during routine radiological examination.

Case 1:

A 28 year old male patient reported to the clinic with a chief complaint of pain in left maxillary posterior teeth since 2 weeks. Clinical intraoral examination revealed a deep pocket between teeth #17 and 18, extraoral examination revealed no trismus or numbness in the right mandibular region, neither was there any facial asymmetry or lymphadenopathy. During intraoral examination there were missing teeth #46, #47 which were extracted due their badly carious condition. The patient's medical history was not

significant and there was no apparent systemic problem.

Radiographic examination revealed the lower right third molar displaced high in the right ascending ramus (**Figure 1**). The crown of the ectopic right mandibular third molar facing the neck of the condyle and the apex facing downward. As no pathology was present in relation to the ectopic third molar and the follicular space was apparently normal. No treatment was done and patient was asked for regular follow as the ectopic tooth was asymptomatic.

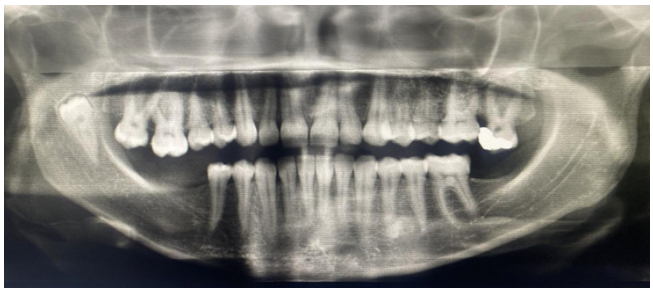

Figure 1. Panoramic photo-radiograph showing an ectopically placed mandibular third molar in the ascending ramus of the mandible.

Case 2:

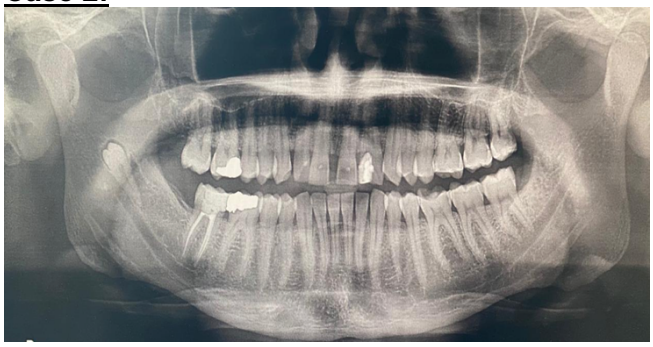

Figure 2. Panoramic photo-radiograph showing an ectopically erupted mandibular third molar in the ascending ramus of the mandible.

A 32 year old male patient reports to the clinic with dull pain and food lodgment in relation to #46 and #47. His past medical history was nothing significant, but he had undergone root canal treatment in #47 and restorations in upper and lower teeth. Extraoral clinical examination showed neither facial asymmetry nor palpable lymph nodes. Intraoral clinical examination showed healthy oral mucosa and missing #48. Radiological examination (**Figure 2)** revealed an impacted and ectopically placed right mandibular molar in the ramus of the mandible with the crown facing the neck of the condyle and apex facing downwards which the patient wasn't aware of. No treatment was done as the patient was asymptomatic and the patient was asked for regular follow up.

Case report 3.

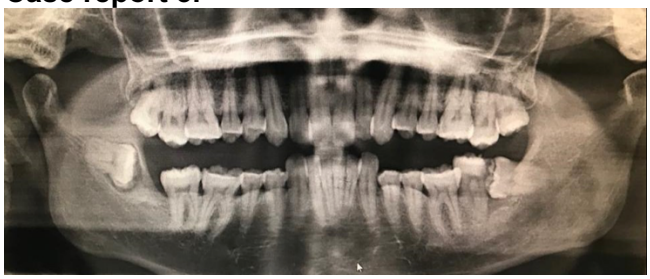

Figure 3: Panoramic photo-radiograph showing the presence of an impacted mandibular third molar in the right ramus of the mandible.

A 35 year old male patient reports to the clinic for regular dental check-up. His past medical history was nothing significant. Intraoral clinical examination showed healthy oral mucosa and missing # 48 and impacted # 38. Radiological examination (Figure 3) revealed impacted and ectopically placed right mandibular molar in the ramus of the mandible. No treatment was done as the patient was asymptomatic and the patient was asked for regular yearly follow up.

Discussion

A few number of case reports with ectopic mandibular third molars in different parts of mandible have been documented [4- 14]. The etiology of ectopic teeth is still not clear. Several theories have been put forward to explain the ectopic location of the teeth such as trauma, ectopic formation of the germs and aberrant eruption. An impacted third molar may be displaced at a distance from its usual location due to an aborted eruption, because of displacement due to lesions (cysts or osseous tumors) or because of an alteration in the eruption due to lesions like odontogenic tumors [4, 6, 9, 12]. The ectopic eruption of the mandibular third molar can be found at distant places from their usual point of origin that includes Condyle, ramus, coronoid process, sigmoid notch and lower border of the mandible [4,6,9,12,13].

The true incidence of impacted ectopic mandibular molars remains unclear. Nagarajappa and Manjunatha[10] reported the incidence to be 1% in general population. Apaydin and

Salahattin [4] in their literature review found 34 cases documented in different locations of the mandible. Majority of cases ectopic within the mandible were seen in the condylar area followed by the ramus. They were found in higher preference among females [4].

Diagnosis is based on clinical findings along with radiological examination, mostly panoramic and CT scans [6, 8, 13]. The signs and symptoms that were reported in documented cases of ectopic mandibular third molar were pain trismus, difficulty in chewing and temporomandibular joint problems [7,8,14]. Still there are few reported cases of asymptomatic patients as in (Figure 1, 2 and 3) included within our present case report, where ectopic mandibular third molars were discovered during routine radiological examination[13].

Some of the cases of ectopic mandibular third molar were associated with a radiolucent lesion on the panoramic radiographs and later were confirmed histopathologically as dentigerous cysts[6].Management of ectopic mandibular third molars when they are asymptomatic without any associated pathology then the patients should be monitored without treatment and regular follow-up. If the tooth is associated with symptoms then, it is must be removed[4, 6].

Surgical management of ectopic mandibular third molars depends on a variety of factors such as symptoms, associated pathology, surgical complications, site and patient's preference[4, 6, 13].

The selection of the surgical approach depends on the preference and experience of the operating surgeon, the location and position of the ectopic tooth and morbidly associated with the surgery[4, 6]. There is common consensus among authors who have documented similar cases that the surgical treatment should be planned carefully with the aim in choosing most conservative technique that produces least trauma to the patient[4, 6, 13]. Intraoral access is performed often to avoid visible scars and facial nerve injury. If the ectopic third molar is positioned in an inaccessible anatomical region with limited surgical field then use of endoscope is then a suitable choice for better visualization of the surgical field instead of extra oral approach[4, 6]. Extraoral approach is used when the ectopic third molar is located high in the condyle or sub-condylar region. The frequently used surgical approaches in extraoral access are: submandibular and retromandibular approaches.

They provide good surgical access to the body and ascending ramus with low rate of facial paresis. The pre-auricular approach provides better visualization of the condyle but often results in aesthetic scars. Complications associated with surgery are very infrequent with possibility of fracture of mandible, nerve injuries and temporomandibular dysfunction[4, 6].

Conclusions

The incidence of ectopic impacted mandibular third molars in the ascending ramus are a rare finding. Asymptomatic ectopic third molars should be managed conservatively without any surgical treatment, but the patient should be followed up yearly. The decision for surgical removal of the ectopic mandibular third molar should be made according to each case differently taking into consideration and evaluating the possible risk factors, complications associated with surgery and benefit of the surgery to the patient.

Declaration of Interest

The authors report no conflict of interest.

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