

An Unusual Presentation of an Ectopic Mandibular Third Molar in the Condylar Region: A Case Report and Review of Literature

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Abstract

Rationale: Ectopic teeth arise from developmental abnormalities, pathological conditions or iatrogenic factors. They can be supernumerary, deciduous or permanent and cause dental and facial pain, swelling and infection. Limited cases reveal limited knowledge about causes, symptoms, treatment options and surgical procedures. A thorough evaluation, including radiographic imaging and clinical examination, aids diagnosis and treatment planning. **Patient Concern:** A 54-year-old female patient complains of tooth mobility in the upper right back tooth region for one month and occasional pain in the right pre-auricular region. **Diagnosis:** Chronic generalised periodontitis with an impacted tooth in the right condylar region. **Intervention:** Extraction of Grade III mobile 17 and conservative treatment for ectopic molar in the condylar region. **Outcome:** The patient is on regular follow-up with no similar complaints. **Take-away Lesson:** A personalised approach is crucial in managing ectopic mandibular third molars and should take into account the patient's symptoms, preferences and potential complications. Successful treatment requires informed decision-making and thorough evaluation.

Keywords: Condyle, ectopic tooth, impacted tooth, mandible

INTRODUCTION

Ectopic teeth are typically identified when they are situated in an abnormal location, distant from their usual anatomic site. These teeth can be supernumerary, deciduous or permanent, and have been found in various heterotopic positions such as the nasal cavity, maxillary sinus, orbit, palate, mandibular condyle and coronoid process.^[1-5] While impacted third molars in the mandible are rare, some have been discovered in an ectopic position, away from their usual location. The limited number of reported cases has resulted in a lack of knowledge about the causes, symptoms, treatment options and surgical procedures for removing these teeth.^[6]

An initial literature search in Medline/PubMed which included articles from January 1975 to December 2022 was performed using the following keywords: 'ectopic tooth', 'third molar' and 'mandibular molar'. The inclusion criteria were: English-language articles generated from the Medline database that included at least one case of an ectopic mandibular third molar and articles that included cases of patients with ectopic mandibular condylar wisdom teeth and listed clinical, diagnostic, and therapeutic criteria.

Of the 57 articles found in the initial search, 32 met the criteria [Table 1].

CASE REPORT

This 54-year-old female patient reported to the Department of Oral Medicine and Radiology with a chief complaint of pain which is dull aching and intermittent in the right pre-auricular region for 15 days followed by tooth mobility in the upper right back tooth region for the past one month. The patient gave no history of any habit or systemic illness. Facial symmetry was noted on extra-oral examination, and mild tenderness was present on palpation of the right pre-auricular region with no swelling. On intraoral examination, Grade III mobility of 17 was present for which

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Received: 21-06-2023

Last Revised: 24-09-2023

Accepted: 17-10-2023

Published: 19-12-2023

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How to cite this article: Patel H, Pandya H, Dewan H, Bhavsar B, Shah U, Makwana P. An unusual presentation of an ectopic mandibular third molar in the condylar region: A case report and review of literature. *Ann Maxillofac Surg* 2023;13:252-4.

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DOI:
10.4103/ams.ams_109_23

she was advised an orthopantomogram. A cone-beam computed tomography was not done due to financial reasons. Then, the patient was referred to the Department of Oral and Maxillofacial Surgery for needful treatment; radiographic evaluation shows an ectopic third molar in the right condylar region in an inverted position with a radiolucent image around the third molar crown and generalised bone loss present [Figure 1]. A continuation of the radiolucent image displayed towards the retromolar trigone simulates an abnormal eruption path. The patient was informed about the ectopic position of the third molar in the right condylar region. The patient was explained about the merits and demerits of leaving the tooth in place or opting for removing the tooth with condylectomy followed by reconstruction of condyle options. The patient was explained that leaving the tooth in place avoids the removal of the condyle and reduces the risk of pathological fracture of the mandible in the future as well as permanent nerve damage. Contrarily, leaving the tooth in place would be associated with a chance of subsequent severe infection and removal would help to prevent associated infection with the tooth. The patient opted for leaving the tooth in place as of now and does not want to undergo surgical treatment, so analgesic was given to relieve pain and was kept on follow-up every biannually. Extraction of 17 was done under local anaesthesia without any complication and was given antibiotics and analgesics for the same.

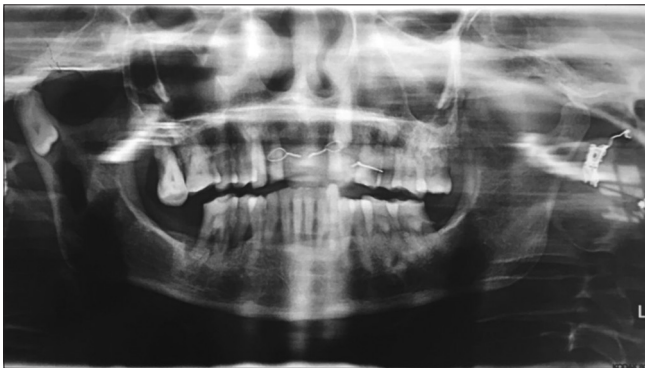


Figure 1: Orthopantomogram shows ectopic third molar in the right condylar region in an inverted position with a radiolucent image around the third molar crown and generalised bone loss

DISCUSSION

There were a total of nine individuals who had an ectopic third molar in the mandibular condyle, including the case of the author, which was taken from the literature [Table 1].

Of nine cases reported in this study, six were women, indicating a higher prevalence of ectopic mandibular third molars in females aged 28–68 years. One patient had bilateral ectopic mandibular third molars,^[5] with one in the condyle and the other in the mandibular ramus. The most common symptoms reported were pain and swelling on the ipsilateral side of the mandible or pre-auricular region, trismus, difficulty in mastication, cutaneous fistulae and temporomandibular joint (TMJ) dysfunction.^[1] Asymptomatic ectopic cases were also reported.

Ectopic teeth are caused by developmental abnormalities, pathological conditions or iatrogenic factors. Theories include aberrant eruption, trauma and ectopic formation of tooth nuclei. Ectopic mandibular third molars are uncommon in dental practice and have no standardised classification. They can cause dental and facial pain, swelling and infection. A thorough evaluation, including radiographic imaging and clinical examination, can aid in the diagnosis and treatment planning. Conservative management may be appropriate, while surgical intervention may be necessary to prevent complications. Further research is needed to better understand ectopic wisdom teeth’s aetiology and management.^[1]

The choice of approach depends on the size and position of the tooth, the presence or absence of symptoms, the patient’s anatomy and the surgeon’s experience. Intraoral access is preferred for small and superficially located ectopic teeth, while extra-oral access is preferred for deeply located ectopic teeth. Endoscopic access has advantages in terms of visualisation and minimal invasiveness but may not be suitable for all cases.^[3] In cases where the tooth is associated with a dentigerous cyst,^[9] enucleation of the cyst is also necessary.

The extraoral approach^[10] is used for ectopic third molars in the condylar region, providing better visibility and a

Table 1: Ectopic mandibular third molars in the condylar region reported in literature

Authors/year	Age	Gender	Third molar position	Symptoms and signs	Treatment
Burton and Scheffer, 1980 ^[5]	57	Female	Condylar region (bilateral)	Left side: Swelling and pain. Right side: No symptoms	Left side: Intraoral surgical removal. Right side: Extraoral surgical removal
Srivastava and Singh, 1982 ^[1]	40	Female	Condylar region	Discharging pre-auricular fistula	Conservative
Wassouf <i>et al.</i> , 2003 ^[2]	49	Female	Condylar region	Pain and swelling	Intraoral surgical removal. Reconstruction with bone chips from the iliac crest
Suarez-Cunqueiro <i>et al.</i> , 2003 ^[3]	45	Male	Condylar region	Pain and swelling	Intraoral surgical removal (endoscopically assisted)
Bortoluzzi and Manfro, 2010 ^[4]	68	Female	Condylar region	Pain, swelling, and fistula	Intraoral surgical removal
Malhotra <i>et al.</i> , 2022 ^[7]	60	Male	Subcondylar region	Difficulty in mouth opening	Extraoral surgical removal
Akbas <i>et al.</i> , 2022 ^[8]	28	Female	Condylar region	Routine dental check-up	Intraoral surgical removal
Forgach and MacLeod, 2018 ^[6]	51	Male	Subcondylar region	Pain and swelling	Intraoral surgical removal
This article, 2022	54	Female	Condylar region	Pain in the right pre-auricular region	Conservative treatment and kept on follow-up

lower risk of injury to adjacent structures. However, it also increases surgical morbidity, such as scarring and numbness. On the other hand, the intraoral approach involves incisions in the oral mucosa and dissection through soft tissue and bone to access the tooth. It is associated with lower morbidity but may not provide sufficient access in all cases, especially for ectopic third molars in the condylar region. The anteroparotid-transmasseteric approach is less commonly used and is reserved for more complex cases or when submandibular or retromandibular approaches are not feasible. The choice of surgical approach should be based on the individual patient's anatomy, the location of the ectopic tooth and the surgeon's experience and preference. In some cases, a combination of approaches may be necessary for optimal access and visualisation. It is crucial to discuss complications with the patient during the informed consent process. The extraoral technique has the following disadvantages: (i) a cutaneous scar, (ii) a danger of facial nerve lesion, (iii) a risk of TMJ lesion, (iv) a risk of salivary fistula and sialocele and (v) a risk of chronic cutaneous fistulas.^[7]

Intraoperative complications can occur during surgical removal of ectopic mandibular third molars, including nerve injury, TMJ injury and aesthetic concerns. Pre-operative planning, imaging and surgical techniques are crucial to minimise these risks. Nerve injury, particularly the inferior alveolar nerve, can cause numbness or paraesthesia in the lower lip and chin. TMJ injury can lead to pain, dysfunction and limited mouth opening. Proper pre-operative evaluation and imaging studies can help identify patients at higher risk for TMJ injury.^[5]

CONCLUSION

An ectopic mandibular third molar is an uncommon clinical condition with vague symptoms. Its position in the mandible is intimately connected to its clinical appearance and determines the surgical strategy. While treating this unusual condition, surgeons must carefully consider the advantages, potential dangers and consequences.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient has given her consent for her images and other clinical information to be reported in the journal. The patient understands that name and initials will not be published and due efforts will be made to conceal identity, but anonymity cannot be guaranteed.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

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