

Mandibular Third Molar Tooth Accidentally Displaced Into Submandibular Space: A Case Report

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Abstract

Tooth displaced into peri oral space is a rare and serious complication while extraction. Such a case of 44y male was reported to our department. Tooth was lost while extraction of left lower back impacted tooth at a private dental clinic and was then referred to our department. Patient presented with pain and trismus. CT scan was advised to locate exact position of tooth. The investigation report suggested tooth was in submandibular space. Removal of a displaced tooth from these spaces were difficult due to poor visualization and limited accessibility intraorally. A thorough evaluation of all significant risk factors was performed in advance to prevent further complications. Then tooth was planned for retrieval under general anesthesia. Tooth was removed surgically through extraoral approach. Patient was managed postoperatively. Wound healing was uneventful. Many of important steps, both presurgical and surgical were missing that lead to this complication.

Keyword: mandibular third molar; tooth dislodgement, submandibular space

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I. Introduction

Impacted third molar tooth is indicated for extraction.¹ The extraction of impacted tooth is nowadays common procedure routinely done by general dentist or oral and maxillofacial surgeon.² Complications, such as pain, dry socket, swelling, paresthesia of the lingual or inferior alveolar nerve, bleeding, and infection, occur in about 1% of third molar extractions. Rare cases have been reported on dislodgement of tooth into fascial spaces. These results due to thin lingual cortical plate, distolingual angulation of tooth, excessive or uncontrolled force, poor clinical or radiological assessment and inadequate surgical technique.³

According to AZNAR-ARASA et al, the most common location is maxillary sinus, other places include the submandibular space, infratemporal space pterygomandibular space and lateral pharyngeal space.³ The symptoms vary from asymptomatic to pain, swelling, trismus based on clinical findings.

Impacted tooth require trans alveolar extraction. This includes proper flap design for adequate exposure, bone guttering, tooth sectioning and safe retrieval of tooth with least trauma to the investing tissue. Additionally, appropriate use of elevator and judicious amount of force minimize complication.⁴

II. Case

A case of 44y male referred from nearby private dental clinic to the department of oral and maxillofacial surgery at Chitwan medical college with chief complain of pain in attempted extraction site. According to patient, he had intermittent pain in left lower back tooth since last 5 days and had visited general dentist at his nearby clinic. IOPA Radiograph was taken and diagnosed as distoangular radiographically. The radiograph was not clear though. Closed extraction was attempted that resulted in loss of tooth on lingual side as per dentist information and thus patient was referred to our center.

Pain management was done and patient examined. Oozing of blood from extraction site, tearing of gingiva, Limited mouth opening, tenderness of submandibular region. Lingual nerve and inferior alveolar nerve injury were also ruled out. An attempt was made to localize the tooth on lingual side or floor of mouth with intraoral finger palpation. But no sign of tooth was noticed. For proper localization of tooth Orthopantomogram (OPG) done that suggested inferior lingual position in respect to mandible. Then tooth retrieval was tried in local anesthesia but failed due to pain and bleeding from socket. CT scan was performed, that suggested tooth in submandibular triangle. After that patient was planned for retrieval under general anesthesia. All basic investigation done for general anesthesia.



Figure: 1

- a. Preoperative orthopantomogram (OPG)
- b. Preoperative axial section of computed tomography scan of mandible conforming presence of displaced tooth in submandibular space
- c. Preoperative three-dimensional computed tomography showing teeth in submandibular space

Consent was taken and Patient was prepared for retrieval of tooth from extraoral approach. Submandibular incision given 1.5cm below the angle of mandible. Dissection done layer by layer taking precautions of all vital structures like marginal mandibular nerve, facial artery, facial vein. Fore finger inserted at the level of attachment as suggested by CT scan into the lingual space and tooth was pulled out.

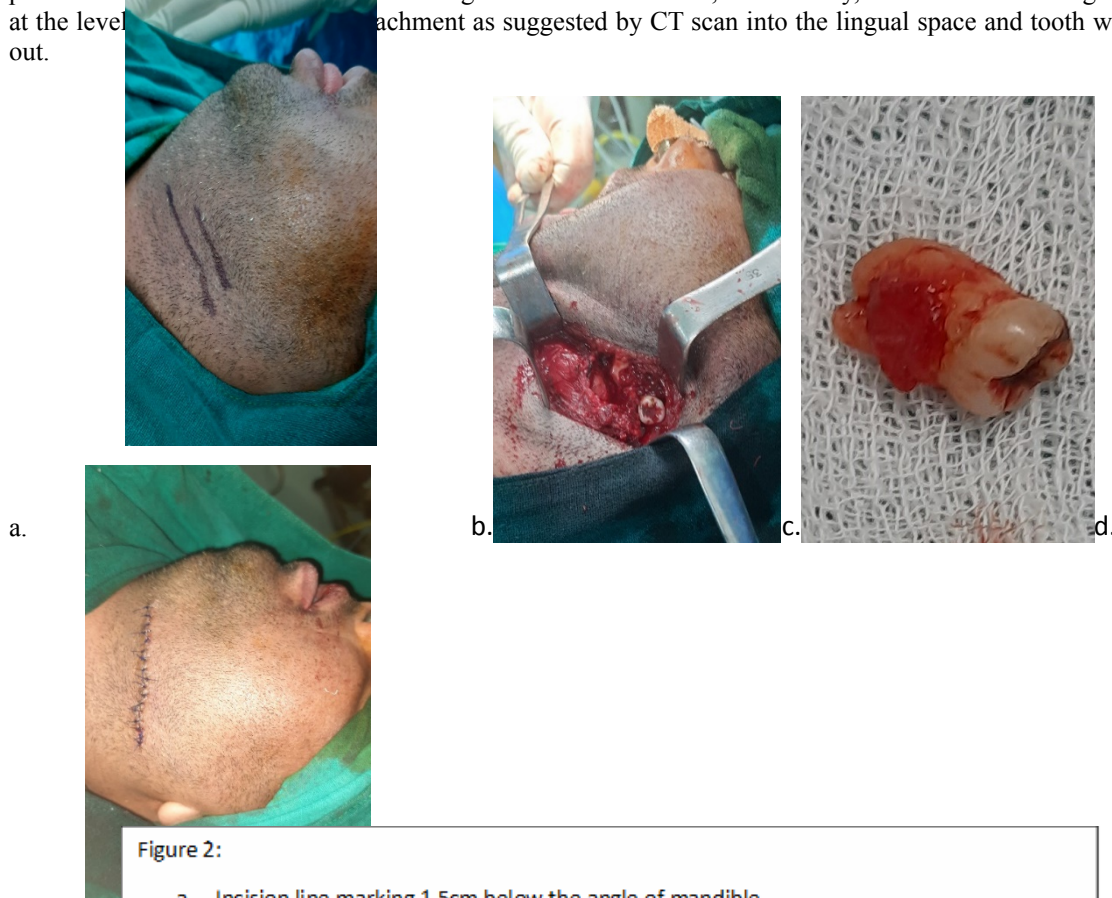


Figure 2:

- a. Incision line marking 1.5cm below the angle of mandible
- b. Exposure of tooth above the sternocleidomastoid muscle
- c. Retrieval of tooth by extraoral access
- d. Approximation of incision line

Incision site irrigated with betadine and normal saline. Incision line was closed in layer. Patient was managed postoperatively with antibiotics, analgesics. Patient was discharged in 3 days and kept in follow up. Wound healing was uneventful.

III. Discussion

It is seen that tooth lost in submandibular space pose difficulty in retrieval. It is very rare and potentially serious complication of extraction of mandibular third molar tooth.⁵ Differences in direction of displacement, size of tooth, angulation of tooth, position of tooth, thin lingual plate, unwanted excessive forces during extraction can influence potential serious complication.

According to Brauer's report this complication has incidence of less than 1%, however actual data is lacking. Most common cause is improper angulation of instruments, unwanted excessive forces, thin lingual plate, wrong handling of elevator and lack of proper surgical skills.⁶

Hence to prevent complication all impacted third molar extraction should be carefully evaluated. Anticipation of future complication and informed consent should be discussed. Dentist executing extractions should follow principles of surgery like adequate accessibility, visibility, flap design, adequate bone removal, judicious use of elevator and avoidance of excessive forces. Dentist must have learned proper basic surgical techniques. While luxating tooth, dentist should give proper finger guidance and support to the tooth and jaw. Before that, impacted cases are meant to be evaluated for Pederson's difficulty index using at least an orthopantomogram. That was the first thing missing in this case. Secondly, dentist should attempt only those cases which are favorable from their experience point of view and resources available at clinics rather than attempting all case. It is rather better to refer such cases to an oral and maxillofacial surgeon who have sound knowledge on prevention and management of complications.⁷

Timing of retrieval is still debate but we follow early retrieval. First of all attempt was made to palpate intraorally. It was not palpable, then radiographic investigations such as orthopantomogram, and CT SCAN were used to locate actual position of tooth.⁸

The basic aim of every doctor is to minimize possible complication with least traumatic extractions. Difficult cases like distoangular, lingually tilted tooth, level B and C, class 2 and 3 on Pederson's difficulty index, curved or multiple roots and OPG suggestive of possible nerve injury should be referred to a specialist.

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