Concrescence - A Report of Two Cases
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Abstract
Concrescence is an uncommon developmental anomaly in which juxtaposed teeth are united in the cementum but not in the dentin. The incidence of concrescent teeth is reported to be highest in the posterior maxilla. The purpose of this article is to report two cases of concrescence between an impacted third molar and an erupted second molar that was identified post extraction.

Key Words: Concrescence; Developmental Anomaly; Cemental Union; Hypercementosis.

Introduction
Altered morphology of teeth can be due to perturbations in the genetic process of odontogenesis. Developmental alterations in tooth shape include concrescence. Concrescence represents a rare developmental anomaly in which two fully formed teeth are joined along the root surfaces by cementum. The cardinal radiologic sign of concrescence is close proximity of adjacent teeth with no detectable intervening periodontal ligament space shadow. When developmental, it might be associated with failed eruption of one or more teeth. When acquired, it may be associated with gross hypercementosis. Maxillary molars are the teeth most frequently involved, especially a third molar and a supernumerary tooth. It is a rare dental anomaly that may be inadvertently diagnosed during tooth extraction. The presence of concrescent teeth may influence surgical procedures along with periodontal, endodontic diagnosis and treatment. So, to reduce the risk of complications associated with the condition, concrescence should be carefully identified and treatment plan should be subsequently altered.

Case Report 1
A 47-year-old female patient reported to the dental office for extraction of upper left second molar in the otherwise edentulous maxillary arch, in order to get a complete denture fabricated. Intra oral periapical radiograph revealed presence of an impacted 3rd molar in close proximity to the 2nd molar. Under local anesthesia an attempt to extract the second molar was made, but the tooth was firm. The tooth was patiently luxated and subsequently extracted. On examination of the extracted specimen, the root of the second molar was bulbous and hypercementosed, fused with the impacted third molar, which was extracted along with the second molar (Fig1). IOPA of the fused specimen showed no detectable intervening periodontal ligament space shadow (Fig2).

Discussion
Concrescence is one of the common anomalies of shape of teeth occurring in posterior maxilla characterized by union between adjacent teeth, through cementum only and not dentin.
“true concrescence” or after development “acquired concrescence”. The mechanisms involved are unclear but it has been speculated that restriction of space during development, local infections trauma and excessive occlusal forces may play a role in this anomaly. (4)

It is the form of fusion between teeth that occurs during root formation i.e. developmental, or after the root development is complete. The exact etiology is unknown concrescence can be due to trauma or chronic inflammation which leads to resorption of interdental bone and deposition of cementum between the roots.(1) Both primary and secondary teeth may be involved. This dental anomaly has a higher incidence of occurrence in the posterior maxilla. The detection of concrescence is important because of the complications it can cause during exodontia. Detecting concrescence clinically is practically impossible and at times misdiagnosed radiographically as a simple radiographic superimposition of roots of adjacent teeth.(4)

Therefore, it is important to consider concrescence when the roots adjacent teeth are not easily distinguishable on a radiograph. Preoperative radiographs with different angulation should be taken to help in diagnosis, which was not done in the cases reported here. It is prudent to take preoperative radiographs in all surgical procedures. This is imperative to prevent potential complications such as fracture of the tuberosity or floor of the sinus.(5)

Conclusion
Clinicians should be aware of this dental anomaly and should consider concrescence, if difficulty is encountered while extracting a tooth in the maxillary posterior region, to avoid the complications such as fracture of tuberosity or floor of maxillary sinus. Routine radiographs should be taken prior to extractions, to avoid any such complications and to alter the treatment plan if required. The treatment should be planned recognizing these challenges and should be targeted at providing the best possible service to the patient.

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References

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Source of Support: Nil, Conflict of Interest: None Declared