

# Concrescence in Primary Dentition: A Case Report

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## Abstract

Concrescence is the connection of two or more teeth by root cementum alone after the tooth crown has been formed. The incidence of concrescent teeth is reported to be highest in the posterior maxilla. The presence of concrescent teeth may influence teeth extraction as well as periodontal, endodontic, orthodontic and even prosthodontic diagnosis and treatment planning. Unexpected complications arising from this condition may lead to legal complications. Therefore, consideration should be given to the possible occurrence, recognition, and implications of this anomaly in diagnosis and treatment planning. The purpose of this article is to report a case of teeth concrescence between upper primary incisors with grade II mobility as it was near exfoliation.

KEYWORDS: Concrescence, primary incisors

## Introduction

Concrescence of teeth is actually a form of fusion that occurs during root formation or after the radicular phase of development is complete. It may occur due to traumatic injury, over-crowding of the teeth with resorption and interdental bone loss, distal inclination of crown of molar, space restriction during development, excessive occlusal trauma and local infection after development. In order for concrescence to take place, the roots of the affected teeth must be in close proximity to each other, and an excess layer of cementum must be deposited to form the union between the roots of the adjacent teeth.<sup>1, 2, 3, 4</sup> Therefore, the union is only in the cementum of the adjacent teeth.<sup>5, 6</sup> One case was reported showing concrescence of the crown of an impacted tooth and the roots of the erupted tooth.<sup>4</sup> The degree of union may vary from one small site to a solid cemental mass along the entire extent of the root.

Two adjacent roots become fused by deposition of cementum between them after the resorption of interdental bone, which may be secondary to traumatic injury, crowding or chronic inflammation (e.g., carious lesion).<sup>7</sup> Concrescence typically affects maxillary molars, especially maxillary second and third molars, but its prevalence is not influenced by age, gender, or race.<sup>8</sup>

In this case the roots of upper primary incisors are fused by cementum. This type of concrescence occurring in primary teeth is not reported before.

## CASE REPORT

A 7 ½ year-old male patient reported to the dental clinic with a complaint of decayed mobile teeth in the upper front teeth region. The patient also mentioned history of mobility of same tooth since one month which gradually increased till the date of examination. This was his first visit to a dentist. The patient reported his past medical history to be negative. No history of any drug or food allergy.



Figure -1 Concreted left primary central and lateral incisor



Figure -2 Dental cast showing retained primary central and lateral incisor



Figure -3 Left intraoral periapical radiograph displaying concreted primary central and lateral incisor

A clinical examination revealed that there were proximal caries between retained upper left central and lateral incisors, these two teeth had grade II mobility. During mobility test both the teeth were moving as one solid piece. Permanent upper left central incisor was erupting lingually to these teeth (Fig 1 & 2).

Radiographic evaluation of the upper left front teeth region revealed fused upper left primary central and lateral incisor at the root region with cementum, and there was proximal caries between these teeth (Fig 3).

Extraction was done to upper primary left central and lateral incisors because these teeth were retained and permanent central incisor was erupting lingually(Fig 4).

Clinical and radiographic examination of these teeth was diagnosed as concrescence.



Figure -4 Post extraction showing concreted primary central and lateral incisor

**DISCUSSION**

Concrescence is believed to occur during root formation or after the radicular phase of development is complete.<sup>1,2,3,9</sup> If concrescence occurs during root formation, it is categorized as developmental and attributed to the close proximity of the developing roots of the adjacent teeth. If concrescence occurs after root formation, it is categorized as post-inflammatory and it may result from a chronic inflammatory response to a non-vital tooth.

In this case, the reason for concrescence might be developmental, due to the position of upper left primary central and lateral incisors and also inflammatory due to the presence of deep proximal carious lesion with the involvement of the pulp and chronic periodontitis. This case is rare as it occurs in deciduous teeth, very few case

reports are there in literature concrescence involving primary dentition.

The detection of concrescence is important because of the potential complication it poses during extraction and endodontic therapy.<sup>1,5,9</sup> It is impossible to be detected clinically, and may defy radiographic detection as well when it may be misdiagnosed as simple radiographic overlap or super-imposition of adjacent teeth.<sup>2</sup> Therefore, it is important to consider this possibility when the roots of adjacent teeth are radiographically indistinguishable. Radiographs with different angulations and exposure parameters may aid in diagnosis. Concreted teeth may give rise to complications, such as an extraction of an adjacent tooth, fracture of the tuberosity or floor of the maxillary sinus. Therefore, it is very important to inform the patient about the condition and potential complications. In such cases, sectioning should be considered to minimize adverse and unexpected outcomes.

## CONCLUSION

Diagnosis of teeth concrescence occurs mainly after a surgical mishap. Therefore, it is important for clinicians to be aware of such odontogenic anomaly in order to minimize adverse and unexpected outcomes during dental treatment.

## REFERENCES

1. Mader CL. Concrescence of teeth: a potential treatment hazard. *General Dentistry* 1984; 32:52-5.
2. Badjate SJ, Cariappa KM. Concrescence: report of rare complication. *New York State Dent Journal* 2008; 74:(1):56-7.
3. Romito LM. Concrescence: Report of a rare case. *Oral Surgery Oral Medicine Oral Pathology Oral Radiology and Endodontics* 2004; 97:(3):325-7.
4. Sugiyama M, Ogawa I, Sueti Y, Tohmori H, Higashikawa K, Kamata N. Concrescence of teeth: cemental union between the crown of an impacted tooth and the roots of an erupted tooth. *Journal of Oral Pathology & Medicine* 2007; 36:(1):60-2.
5. Eversole LR. *Clinical Outline of Oral Pathology: Diagnosis and Treatment*. 2nd Edition. Philadelphia: Lea and Febiger. 1981; 318-9.
6. Killan CM, Kroll TP. *Dental Twinning Anomalies: The Nomenclature Enigma*. Quintessence International 1990: 21:571-6.
7. Shafer WG, Hine MK, Levy BM. *Text Book of Oral Pathology*. 4th Edition. Philadelphia:Saunders. 1983:38-40.
8. Kyle J.Gernhofer. Concrescence of a maxillary second and third molar. *Journal of California Dental Association* 2009; 37(7):479-81.
9. McCoy-Collins RA, Tatum RC, Marfatia-Rege A. Fused maxillary second and third molars: report of a rare case with literature review. *Journal of the Maryland State Dental Association* 1988; 31:102-5.