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A 1-YearFollows Up Of Pseudo-Recession In Erupting Permanent Mandibular Incisors: A Case Report

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Abstract: *Localized gingival pseudo-recession occasionallypresents a problem in children and there is some confusion regarding the etiology and pathogenesis of such defects.*
A case of a 8 year-old boy with gingival pseudo-recession at a mandibular permanent central incisor was described.The situation was followed over a 1-year period with no treatment other than prophylaxis and oral hygiene instruction. The final outcome was a stability of marginalperiodontal at theteeth andspontaneous improvementofperiodontal environment.
Keywords:*pseudo-recession, permanent mandibular incisors, eruption*

I. Introduction

Localized gingival recession is uncommon in the child patient and where present, is more prevalent in the mandibular incisor region. In an extensive survey of recession in mandibular central incisors of 1800 children, Mathuret alreported a prevalence of only 18%[1, 2].

Most authorscompletely deny the existence of "true" recession in children, this gave rise to the appellation of "apparent" gingival recession as described by Woofter. He dismissed recession in children as a mere indication of delayed maturity of the gingival cuff of theadjacent paired tooth and not a "true" recession of the affected tooth[3].

A review of the literature pertaining to gingival recession in young subjects showed that there was confusion concerning the local etiological factors related to pseudo-recession in the lower incisor region, also few studies have evaluated the gingivalmorphology of the mandibular incisor region in the developing dentition[4].Thus there is need for further study of possible causative factors and the prevalence pseudo recession.
This present case report examines gingival pseudo-recession mandibular incisors in a 8 year old boy, and determinesthe therapeuticapproachin such a situation.

II. Case Report

The mother of a 8 year‑old boy consulted theperiodontal department of thedental clinic of IbnSina university hospital of Rabatwas not happy with the appearance of the mandibular incisors. She complained about the retraction of gingival margin and excessive crown height of the central mandibular incisors. The general examination didn't reveal any particular general pathology or known drug allergy.

Periodontal evaluation revealed a good oral hygiene and absence of inflammation. A localizedretraction of gingival marginswas present on the labial surface of the mandibular central incisors (31, 41), withoutdenudationof the root surface [Fig 1]. The affected teeth (31, 41) were asymptomatic with no plaque or calculus accumulation and there were neither associated inflammation nor bleeding on probing.
Nofrenalpullwas found after examinationthe lower labial frenum,and the patient's history revealed no trauma or other factors that would be considered as risk factor of recession.

No special effort was directed in the treatment of the gingival condition of this patient, with the

exception of professional oral hygiene supervision, which was reinforced every 3 months.At least in relatively well-aligned teeth, without recession risk factors, a conservative, monitoring approach prior to a decision on surgical intervention seems prudent.

Six months later, the patient was reexamined. The permanent mandibular lateral incisors were erupting. The gingival level of the two adjacent teeth 42 and 32 was the same, while the gingiva of the affected teeth was about 3‑4 mm short of the margin of the adjacent teeth[Fig 2].

One year later, the patient was reexamined.The stability of marginalperiodontal at the teeth 31 and 41 has taken place,diastemaclosure and spontaneous improvementofperiodontal environment were observed[Fig 3].

Figure 1: localized pseudo-recession of the labial gingiva of teeth 31 and 41 in a healthy mouth

Figure 2:Six months later, gingiva level of teeth 31 and 41 was about 3‑4 mm short of the margin of the adjacent teeth

Figure 3:One year later: stability of marginalperiodontal at the teeth 31 and 41.

III. Discussion

There is little information in the literature about developmentalchanges in the morphology of the gingival unit during the mixed dentition period. During permanent tooth eruption, apical movement of the gingival margin does not correspond to the amount of occlusalmovement of the teeth. The results presentedby Volchansky and Jones demonstrated that gingival height did not stabilize in the central incisor region before the age of 12 years. Some dimensional changes can occur and may be influenced by the stage of eruption, the position of the teeth in relation to the bucco-lingual dimension of the alveolar process, and the presence of gingival inflammation [5,6,7].

Persson and Lennartsson noted that some teeth with gingival recession had improved without special measures. They suggested that developmental changes in the dentition during growth might influence the

potential for improvement of gingival environment[8]. The observations that pseudo-recession may decrease over time could explain why Parfitt and Major in a cross-sectional study noticed a higher incidence of pseudo-recession in mandibular incisor in younger compared to older children[9].

Should the post-eruptive investing soft tissue be comprised predominantly of non-keratinized mucosa, inflammation and recession would be more likely to occur than in cases where the investing soft tissue consisted of keratinized gingiva[10]. The role of plaque‑induced inflammation in the etiology ofgingival recession is established in literature, Powell and McEniery suggested that gingival inflammation itself may lead to recession, and associated factors, such as crowding, may accelerate the process. This patient did not show gingival inflammation at the first examination[11].

This patient showed a goodpositioning of teeth but witha labial positioning of the permanent mandibular central incisors.
Asignificant association between the positioning of tooth and mandibular incisor recession and pseudo-recessions has been reported by a number of authors, they have confirmed that malpositioning of teeth are predisposed to localized recession of the labial gingiva [12,13].
Also, it was observed that the gingival margin of a labiallyinclined mandibular incisor often is positioned more apically than the gingival margin of the adjacent incisor, this discrepancy in clinical crown lengthof one tooth relative to an adjacent tooth is primarily an esthetic problem. However, some investigators suggest that the apical displacement of the gingival margin may traverse the cement-enamel junction and expose cementum, resulting in true recession [14,15].

Injury to the gingival tissue may be the result of toothbrush trauma,Gormanhighlighted that toothbrush trauma to be the most frequent factor associated with gingival recession [16].The role of traumatic occlusion in gingival recession is not clear. Woofter did not consider traumatic occlusion an important factor in gingival recession, while Geiger concluded that premature contact in centric closure in patients with crossbite or edge-to-edge occlusion can contribute to crestal alveolar bone loss, resulting in localized recession [3,17]. None of these factors was identified in the patient in this case report.

Another possible etiologic factor to be considered is frenal involvement. Powell andMcEniery found no significant association between high frenal pull and mandibular incisor recession. However,this identified etiology corroborates literature as being more important than plaque accumulation as an etiological factor for gingival recession in children [10,18,19].
No frenal pull or high muscle insertion was identified in the patient in the present report.

Some studies have demonstrated that gingival recessionof the labial surfaces of the mandibular central incisorsin the mixed dentition is reduced over time.According to Andlin-Sobocki et al, localized gingival recession in the mandibular region in children may improve without special measures [20]. Developmental changes in the dentition during growth, favoring incisor alignment, may contribute to a reduction of the recession.During the 2-year observation period, increases in widths of the facial keratinized and attached gingiva were noted. Increases occurred for the various tooth regions examined and for deciduous as well as permanent teeth [21]. No special effort was directed in the treatment of the gingival condition of this patient, with the exception of professional oral hygiene supervision, which was reinforced every 3 months. The parents were instructed to help their son brush his teeth before going to sleep each night. Poweir reported that control of marginal inflammation appeared to be the most important measure in limiting progressive recession [22].Conservative therapy consists of oral hygiene instruction and prophylaxis. This treatment is based on the concept that pseudo-recession reflects a precocious maturity of the gingival margin of the affected tooth and that, given time, the adjacent teeth will achieve a similar gingiva marginal level.The finding of Sobockiet al that pseudo-recession in mandibular incisors in young children often improves over time suggests that reparative treatment in this part of the developing dentition may not be necessary. Decisions regarding such treatment should be postponed until any spontaneous improvement has taken place [23].

IV. Conclusion

Gingival pseudo-recession in mandibular incisors in young children often decreases over time, therefore reparative surgical treatment in this part of the young developing dentition may not be necessary. Decisions about such treatment should be postponed until possible spontaneous improvement has been allowed to take place.

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