Journal of
Dentistry and Oral Health

JScholar
Fostering Scholarly Communication

Case Report Open Access

A Comprehensive Management of Unusual Presentation of A Supernumerary Tooth Causing Anterior Cross Bite In Mixed Dentition – Case Report

Ayman Farhan Alelaimat*, Oraib Ahmed Ababneh, Tagreed Falah Jaradat, Enas Fwaz Othman, Lina khaled Obeidat, Ghadeer Mohammed Alzoubi and Alaa Odeh Almaaita

Senior specialist in Pediatric Dentistry, Jordanian royal medical services, Jordan

***Corresponding author:** Ayman Alelaimat, Senior Specialist in pediatric dentistry, Jordanian royal medical services, Jordan, Tel: 00962796777925; E-mail: aymfarmo@yahoo.com

Received Date: September 10, 2021 **Accepted Date:** October 10, 2021 **Published Date:** October 12, 2021

Citation: Ayman Farhan Alelaimat (2021) A comprehensive Management of Unusual Presentation of A Supernumerary Tooth Causing Anterior Cross Bite In Mixed Dentition – Case Report. J Dent Oral Health 8: 1-9.

Abstract

Background: Anterior cross bite is an abnormal relationship between one Or more maxillary and mandibular incisor teeth. It can be corrected by several treatment modalities , it can be occurred due to many causes one of them is supernumerary tooth which is an extra abnormal tooth.

Case report: This case report describes the use of glass ionomer restorative material (Ketac™ Fil Plus Aplicap™ Glass Ionomer) on the occlusal surfaces of the lower first molars to allow self-correction of maxillary central incisor through Posterior bite opening, after surgical removal of the Supernumerary tooth.

Conclusion: Using reinforced glass ionomer pads can be considered simple and Effective treatment modality to correct anterior cross bite in mixed dentition in class 1 Malocclusion.

Keywords: Cross Bite; Supernumerary; Posterior Bite Opening

©2021 The Authors. Published by the JScholar under the terms of the Creative Commons Attribution License http://creativecommons.org/licenses/by/3.0/, which permits unrestricted use, provided the original author and source are credited.

Introduction

Anterior cross bite can be defined as palatal positioning of upper permanent incisor teeth in relationship to lower incisor teeth [1], Dental cross bite involves localized tipping of a tooth or teeth and does not involve basal bone [2] the reported prevalence of anterior Cross bites varies between 2.2% and 12%, depending on the age of the subjects, whether an edge-to-edge relationship is included in the data, and the ethnicity of the children Studied. [3] Anterior cross bite may be caused by multiple factors including the presence of Supernumerary tooth.

Supernumerary tooth [ST] is defined as "any tooth or odontogenic structure that is formed from tooth germ in excess of usual number for any given region of the dental arch [4] supernumerary tooth commonly occur in the premaxilla, sometimes appear as single isolated and other times as multiple and it could be unilateral or bilateral .Many hypotheses explain the Occurrence of supernumerary teeth but the exact cause still not known [4,5] Supernumerary tooth can cause a lot of dental problems like crowding , cystic lesions delayed eruption and anterior cross bite.

In this case the main cause is the presence of palatal positioned supernumerary tooth. Various treatment modalities used to correct anterior cross bite such as removable appliance with Z- springs, tongue blade, fixed acrylic planes and others in this case we decided to Use glass ionomer restorative material on the occlusal surfaces of lower first molars to raise the bite and allowing self-correction after surgical removal of the supernumerary tooth.

Case report

The study was approved by the Ethical Committee of the Royal Jordanian Medical Services. No (1/2019) on 22-1-2019 patients' parents were informed about the aims and methods of this study, and they provided written consent to participate 8 years old male patient without any relevant medical history, presented to pediatric dental clinic in queen Rania al-Abdullah hospital at royal medical services complain from the appearance of his upper anterior teeth as shown in Figure 1.

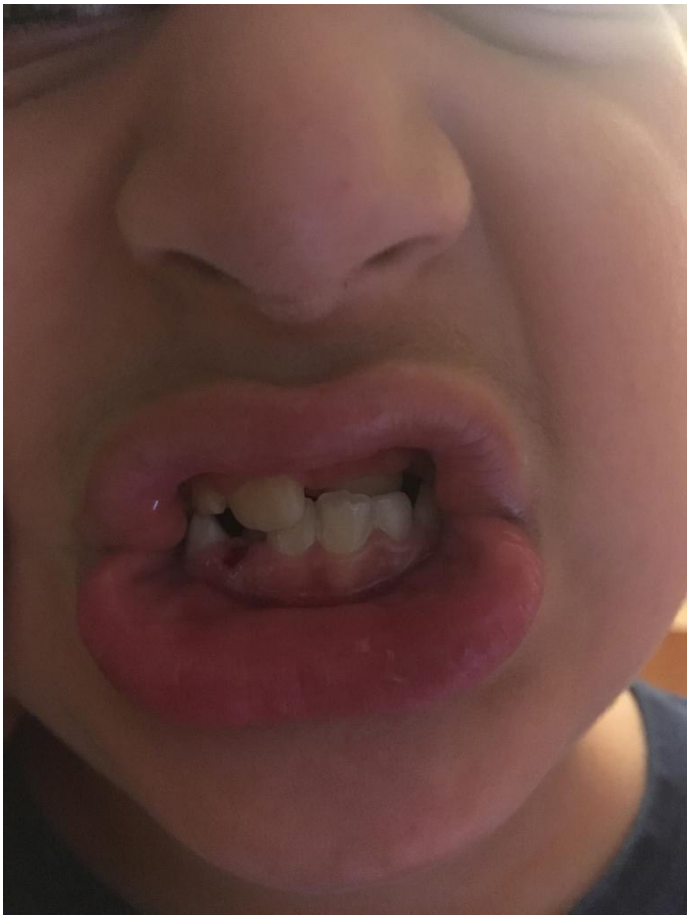

Figure 1: 8 years old male complaining from the appearance of his upper anterior teeth

He presented in a mixed dentition with class 1 malocclusion and lingually positioned Maxillary left central incisor there was enough mesiodistal space for labial movement of upper maxillary tooth.

Full medical history taken with no relevant medical condition, after dental history and clinical examination an orthopantogram [opt] showed the presence of supernumerary tooth, cone beam cut tomography taken showed the exact position and relation of the supernumerary tooth to the upper permanent maxillary right central incisor as shown In Figure 2, supernumerary teeth in the premaxilla or anterior teeth may cause several complications such as delayed or failure of eruption , root resorption , displacement rotation of the permanent maxillary central incisors [6].

After informed consent, and ethical committee approval treatment plan was discussed with patient mother and it was to extract The supernumerary tooth and to open the bite posterior area by applying a glass ionomer restorative material to give a chance for self-correction. Surgical removal of the supernumerary tooth under general anesthesia was done as shown in Figure 3.

After two weeks with complete wound healing, the decision was to allow self-correction of maxillary central incisor through Posterior bite opening either by using composite or glass ionomer, Ketac™ Fil Plus Aplicap™ Glass Ionomer Restorative was the treatment of option because of easy manipulation, Self-cure and one-step placement. 2-3 mm thickness of glass iomomer applied on the occlusal surfaces of the mandibular permanent first molars distobuccal cusp to rise the bite approximately 1-2 mm to allow enough space to move the tooth in cross bite as Shown in Figure 4.

Follow up arranged every two weeks. As shown in Figures 5 and 6 after six Week the treatment end with full correction of the cross bite as shown in Figure 7

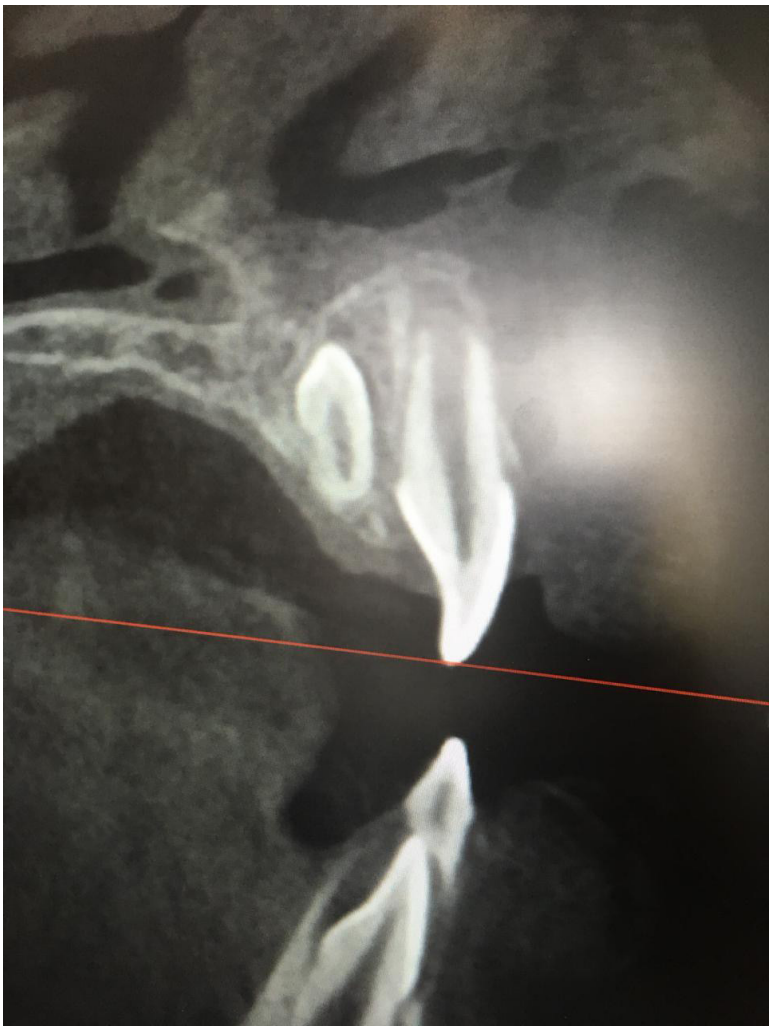

Figure 2: cone beam cut showing the exact location of a supernumerary tooth

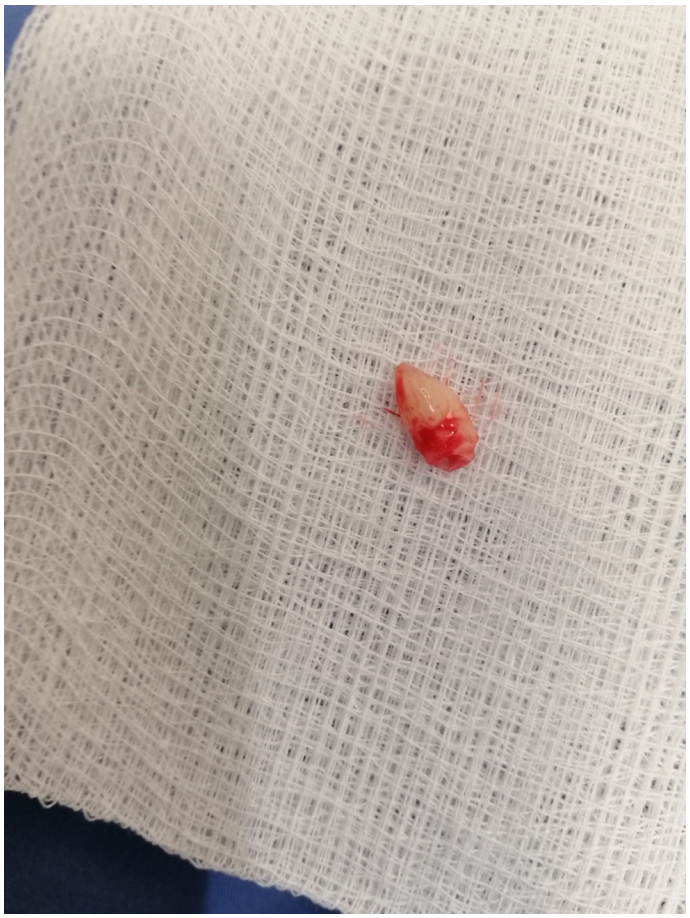

Figure 3: 3 cm supernumerary tooth extracted under general anesthesia

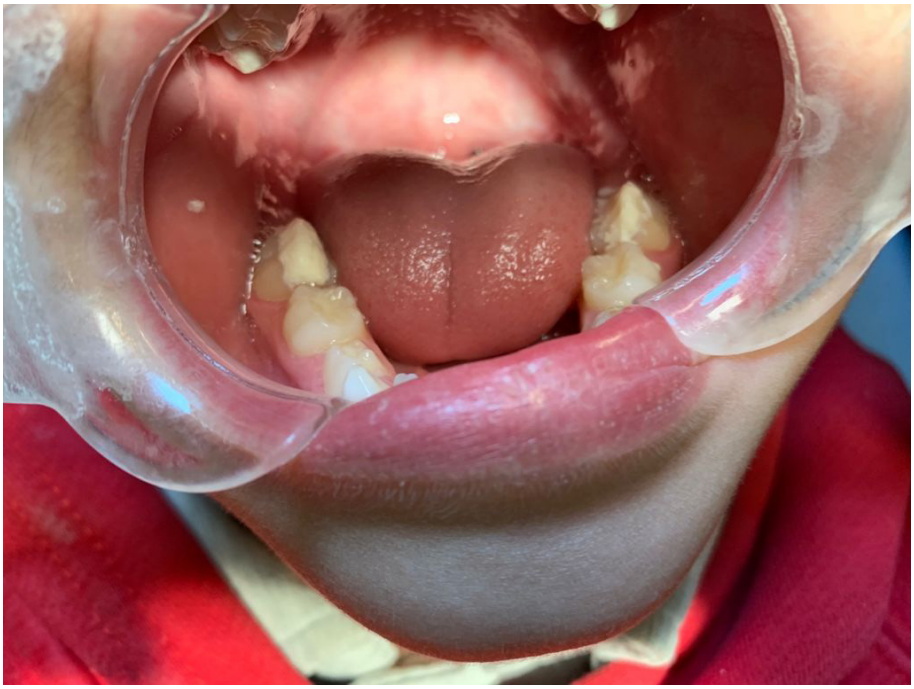

Figure 4: Glass ionomer pads on lower first permanent molars

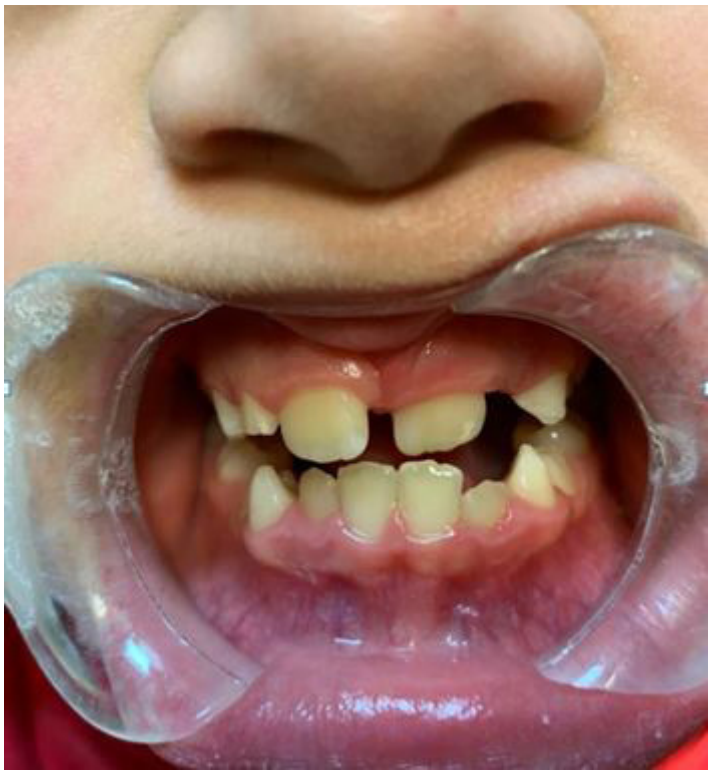

Figure 5: follow-up after 2 weeks

Figure 6: follow-up after four weeks

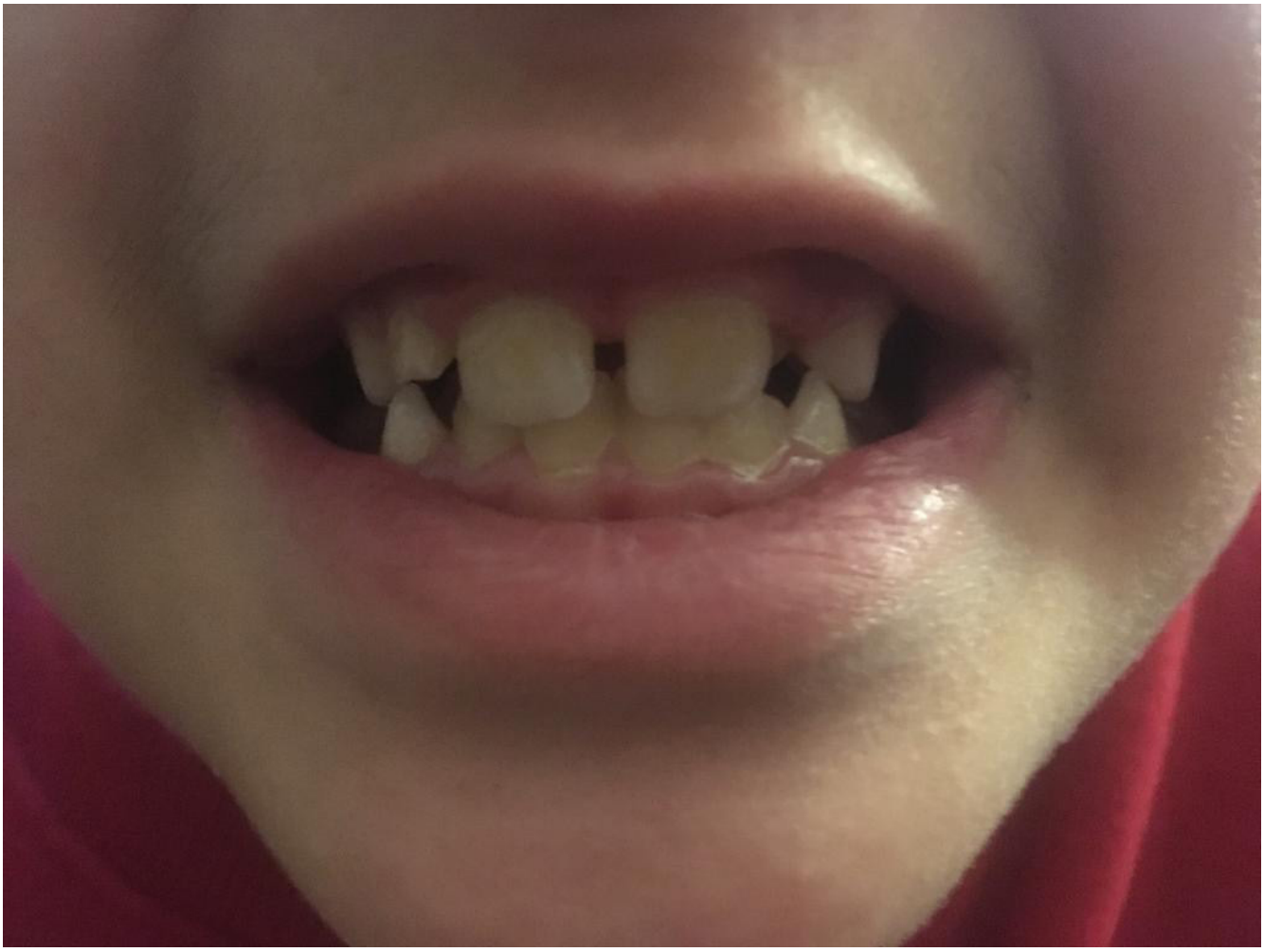

Figure 7: complete correction after 6 weeks

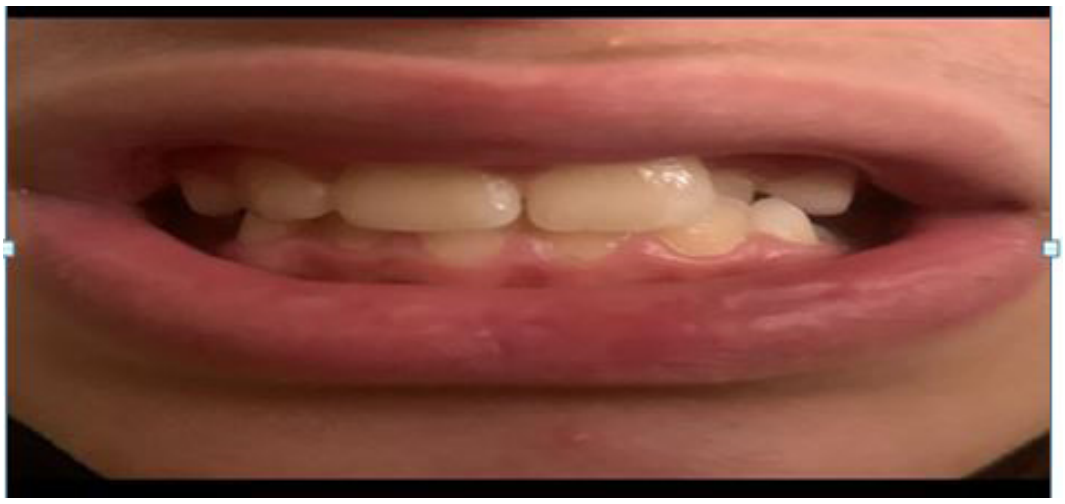

Figure 8: 2 years review

At 2-yers review, the corrected tooth was still in positive overjet as shown in Figure 8. After two years follow up with the time of eruption of the maxillary permanent lateral incisor it also found in a cross bite position which suggest that the anterior cross bite is a multifactorial problem and one of them is the presence of a supernumerary tooth [7].

Discussion

One of the aims of pediatric dentistry is the interceptive treatment of malocclusion to Guide the dentition to normal occlusion, much interception treatment can be done at Mixed dentition.

Many dental problems may be caused by anterior cross bite including periodontal problems, enamel abrasion, mobility of teeth.

In case of anterior cross bite, the chance for self-correction is low because the maxillary upper central incisor is locked by the mandibular central incisor [4].

Simple anterior cross bite can be caused by retained primary tooth, a delayed eruption of permanent dentition, Supernumerary tooth and other Several etiological factors.

There are many treatment modalities to correct anterior cross bite like reversed stainless steel crown, lower inclined bite plain, tongue blade, anterior finger spring [8].

In this case after a full discussion with patient mother the treatment plan was to go with the most simple procedure which was the application of glass ionomer restorative material on the occlusal surfaces of lower permanent first molars. and the results was satisfied for both the patient and his mother.

The decision taken to use reinforced glass ionomer pads for the correction of anterior cross bite because it is safer, easy Procedure, more economic, need less time, comfortable, need few visits when compared with other treatment modalities.

Conclusion

Posterior bite opening by restorative materials like composite and glass ionomer considered an effective and easy method to correct simple anterior cross bite.

References

1. Sule Bayrak, Emine Sen Tunca (2008) Treatment of Anterior Dental Crossbite Using Bonded Resin-Composite Slopes: Case Reports European J Dent 2: 303-7.

2. Tsai HH (2001) Components of anterior crossbite in the primary dentition. ASDC J Dent Child 68: 27-32.

3. Anna-Paulina Wiedela Lars Bondemark (2015) Stability of anterior crossbite correction: A randomized controlled trial with a 2-year follow-up Lars Bondemark Angle Orthodontist 85: 1.

4. RS Omer, RP Anthonappa, NM King (2016) Determination of the optimum time for surgical removal of unerupted anterior supernumerary teeth. Pediatric Dentistry 32: 14-20.

5. RP Anthonappa, RSM Omer, NM King (2008) Characteristics of 283 supernumerary teeth in Southern Chinese children," Oral Surgery, Oral Medicine, Oral Pathology, Oral Radiology and Endodontology 105: e48–e54.

6. Yun-Hoa Jung, Ji-Yeon Kim, Bong-Hae Cho (2016) The effects of impacted premaxillary supernumerary teeth on permanent incisors: Imaging Science in Dent 46: 251-8

7. Alberto Caprioglio, Rosamaria Fastuca (2016) Etiology and treatment options of anterior open bite in growing patients: a narrative review Orthod Fr 87: 467-77.

8. Cristina B, Miamoto, Leandro S, Marquesb, Lucas G, et al. (2016) Comparison of two early treatment protocols for anterior dental crossbite in the mixed dentition: Angle Orthodontist 88: 2.

Submit your manuscript to a JScholar journal and benefit from:

- Convenient online submission
- Rigorous peer review
- Immediate publication on acceptance
- Open access: articles freely available online
- High visibility within the field
- Better discount for your subsequent articles

Submit your manuscript at
http://www.jscholaronline.org/submit-manuscript.php