Title: Orthodontic treatment of a severe anterior open bite and an alveolar bone defect caused by incisor trauma: A case report

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Author’s response to reviews:

Dear Editor,

We would like to express our sincere appreciation for your careful reading and helpful comments. Those comments are all valuable and very helpful for revising and improving our paper, as well as the important guiding significance to our researches. The manuscript has been carefully rechecked and appropriate changes have been made in accordance with the editor’s and reviewers’ comments and these changes have been highlighted. Also, general language editing was completed by native English speaker to improve the readability of the manuscript. We hope that the revised manuscript is now suitable for publication in your journal.

I look forward to your reply.

Sincerely,

Zhenyu Ni

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Responses to Reviewer: Nicole R Scheffler

Minor Essential Revisions:
Comment 1. Background/Introduction: moving the background information of the 4th paragraph of the discussion that discusses anterior open bite malocclusion and difficulty of open bite treatment in conjunction with an ankylosed incisor to the Background/Introduction section. Even part of the first paragraph of the discussion may also be better in the background/introduction section so there is no redundancy in the discussion.
Comment 2: A superimposition of pre-and post-treatment cephalometric radiographs should be included.

[Answer] We add superimposition (the Fig.10).

Comment 3: Discussion and Conclusion: Relapse of anterior open bites is common after intruding posterior teeth and references should be quoted explaining relapse of the posterior intrusion and anterior extrusion as the reason for the open bite relapse of this case.

[Answer] We add contents about the reason for the open bite relapse in the discussion (Page 6, Para 1, Line 11-22) and references


Responses to Reviewer: Pawanjit Singh Walia

Major Compulsory Revisions: As reported by the author, the open bite increased gradually from 8 yrs to 16yrs, but there is no history of any habit. This is not possible without compensated tongue thrusting. So, a habit history should be mentioned.

[Answer] According to the patient’s words, the open bite increased gradually from 8 yrs to 16 yrs. We believed that the open bite increased gradually because of the dentoalveolar ankylosis which inhibit vertical alveolar bone growth, some researches1,2 supported this viewpoint. To reconfirm the habit history of this patient, we call back his parents and the parents confirm the compensated tongue thrusting. We forgot wrote the habit history in the article. In truth, during the treatment, the patients insisted on doing orofacial myofunctional therapy. We told him that the therapy will be helpful for the openbite treatment and retainer3. We add the habit history in the Case report. (Page 2, Para 4, Line 4-5)


Minor Essential Revisions:
1) Extraoral smiling photograph should have been there, showing open bite. [Answer] It is a pity that the patient smiled unwillingly pretreatment, he rejected showing open bite and was ashamed of his smile, so we give up pretreatment extraoral smiling photograph. We believed that it is not good for this patient’s mental health, and the intraoral pictures or cephalometric analysis can show open bite.

2) In 9th line of abstract, it should have been retained instead of remained. [Answer] We have corrected.

3) Specifications for push coil spring used & initial wire sequence should be mentioned. [Answer] We have added in the article. (Page 3, Para 6, Line 6-8 and Line 11)

4) In treatment progress, Vertical elastics were given should be there instead of was performed. Before Fig. 4, F, instead of cost, it should have been took. [Answer] It has been revised accordingly. (Page 4, Para 1, Line 14)

5) Overall all improvement in English- grammar & spelling is needed. [Answer] General language editing was completed by native English speaker to improve the readability of the manuscript.

Responses to Reviewer: Sung-Hwan Choi

1) the ankylosed incisor -> the ankylosed maxillary left incisor
the left incisor -> the maxillary left incisor
left incisor -> the maxillary left incisor
left maxillary canine -> the maxillary left canine
the left central incisor -> the maxillary left central incisor
the central incisor -> the maxillary central incisor

[Answer] It has been revised accordingly.

2) In background, the purpose of the study should be presented in the author [Answer] We add the content of the purpose of the study in background (Page 2,
3) This patient had a retruded mandible, a high mandibular plane angle and reverse curve of Spee of the mandibular arch. In this case, to minimize the relapse, I think that authors should have used the mechanics with temporary anchorage devices in order not to affect the adjacent teeth rather than the extrusive mechanics with intermaxillary vertical elastics. Authors should discuss the reasons why TADs were not used.

[Answer] Usually, we use temporary anchorage devices (mini-implants) to intrude molar to solve severe anterior open bite and this solution can minimize the relapse of open bite. This patient was scared of implant and rejected it, although we explained the benefits of implant and the disbenefits of intermaxillary vertical elastics, in the meantime, anterior alveolar bone defect can be treated and the smile with little incisors can be improved when we used intermaxillary vertical elastics to extrude anterior incisors, so we chose the extrusive mechanics with intermaxillary vertical elastics.

We add reason in the discussion. (Page 5, Para 4, Line 1-7)

General language editing was completed by native English speaker to improve the readability of the manuscript.