READER'S FORUM

Yu J, Park JH, Bayome M, Kim S, Kook YH, Kim Y, Kim CH

Treatment effects of mandibular total arch distalization using a ramal plate.

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I appreciate the authors for this interesting article. I think that ramal plate is one of the best treatment options for total arch distalization. I have some questions as follows.

Q1. I think the ramal plate that author has introduced can expand the limit of class III malocclusion compromise treatment. What are your opinions about the indication and the limitation of skeletal Class III camouflage treatment by using the ramal plate, compared with mini-screw or orthogonathic surgery?

Q2. Does the ostectomy executed for extraction of impacted third molar nearby retromolar fossa make it difficult to place the ramal plate?

Q3. In general, tissue irritation and inflammation are frequently observed around the TADs passing through the movable tissue. Isn't there any soft tissue problems related to peri-ramal plate? If so, is there any special method to manage soft tissue (or flap)?

Q3. According to the result and discussion in this article, the amount of the distal tipping of lower first molar is less than the results of previous researches. Considering the distal force at bracket level, can you recommend any clinical tip to reduce the distal tipping of posterior teeth?

Questioned by

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A1. The authors also believe that the ramal plate can increase the range of Class III camouflage treatment. It allows for a larger range of molar distalization compared to miniscrews, resulting in the possibility of resolving a larger amount of arch length discrepancy. Therefore, some cases that used to be referred for surgical treatment can be considered for nonsurgical approach aided by the ramal plate. However, the plate cannot resolve mandibular asymmetry or mandibular prognathism. In addition, the space available for the lingual retraction of the anterior teeth should be considered.

Moreover, the use of the ramal plate can replace the miniscrews for distalization of the mandibular dentition because of its superior biomechanics which lead to less tipping of the molars, beside the relatively higher failure rate of miniscrews in the mandible. Therefore, the ramal plate is more effective in distalization than the miniscrews.

A2. In most of the cases it should not be the case and the surgical removal of the 3rd molar would not make the placement more difficult. However, this also depends on the extent of the surgical trauma to the bone and the period between the surgical removal of the 3rd molar and the placement of the plate.

A3. It is true that inflammation is frequently observed around TADs placed in the movable mucosa. However, the area where the arm of the plate passes through the mucosa is more posterior to the region affected by the

cheek movements. Therefore, the ramal plate shows less inflammation compared to the miniscrews placed in the interradicular spaces or in the buccal shelf area. Good oral hygiene is essential for preventing the inflammation, therefore we usually recommend the use of water pick for our ramal plate patients.

A4. In our study, the point of application of force was at the bracket height and the force vector was extending

posteriorly on the same level if not slightly more occlusal. This approach would not completely prevent the distal tipping but it would produce less distal tipping than the miniscrews in which the force vector is directed apically.

Replied by

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