

READER'S FORUM

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Stability of bimaxillary surgery involving
intraoral vertical ramus osteotomy with
or without presurgical miniscrew-assisted
rapid palatal expansion in adult patients
with skeletal Class III malocclusion.

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It has been a challenge for the orthodontists to correct the transverse problem for the skeletal Class III patients who need orthognathic surgery. In this aspect, this article talks about an important clinical tip with the scientific evidence. I would like to ask some questions to get more pearls from the experience orthodontic group of the authors. I hope this would help all the readers of the Korean Journal of Orthodontics.

I guess the authors have quite a lot of experience in treating the patients with skeletal Class III malocclusion who needs maxillary expansion to correct the transverse disharmony. As the authors mentioned, miniscrew-assisted rapid palatal expansion (MARPE) has gotten a spotlight recently. But in real clinical situations, there are some cases with which MARPE would be the perfect option for expanding the maxilla but it is impossible to set the appliance in the mouth such as the case with narrow and high palatal vault.

Q1. In this clinical situation, is there a special technique of the authors' to deliver the MARPE? If there is not any, what would be the alternative plan to coordinate the maxillary and mandibular transverse dimension?

Q2. The surgical plan was explained so briefly in the article. Is there any special considerations in surgery-planning for such patients who underwent MARPE before the operation?

Q3. While performing the post-surgical orthodontic treatment or after MARPE before the surgery, is there any special protocol or appliance to maintain the result from the MARPE? And is it different from the other expansion adult cases without orthognathic surgery?

Questioned by

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First of all, I would like to express my gratitude to the reader who has been interested in our article and asked questions. It is not enough, but I will try to answer the reader's question. Also, please refer to the 2 papers below for a better understanding.

- Choi SH, Shi KK, Cha JY, Park YC, Lee KJ. Nonsurgical miniscrew-assisted rapid maxillary expansion results in acceptable stability in young adults. *Angle Orthod* 2016;86:713-20. doi: 10.2319/101415-689.1.
- Shin H, Hwang CJ, Lee KJ, Choi YJ, Han SS, Yu HS. Predictors of midpalatal suture expansion by miniscrew-assisted rapid palatal expansion in young adults: A preliminary study. *Korean J Orthod* 2019;49:360-71. doi: 10.4041/kjod.2019.49.6.360.

A1. As the reader will tell, if the patient's palatal is very narrow or has a high palatal vault, the application of con-

ventional MARPE with the placement of four miniscrews can be difficult. In this case, you can adjust the hook of the MARPE to make it fit as much as possible, or you can choose to insert the miniscrews only in the front or rear.

A2. The expansion protocol of MARPE and related orthognathic surgical plan are not significantly different from conventional RPE. However, since it is mainly used by adults, it is necessary to closely observe whether the gingival recession of the anchor tooth develops during expansion. Also, scrupulous oral hygiene maintenance including copious saline irrigation followed by gingival massage may be required to prevent inflammation of the tissue around the miniscrews.

A3. Immediately after the removal of MARPE, the maxillary fixed orthodontic appliance is bonded. Since MARPE also undergoes overexpansion like conventional RPE, installation of transpalatal arches right after MARPE removal is mostly unnecessary. Through leveling and alignment, the premolars need to be lingually relocated during alignment according to arch form.

Replied by

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