READER'S FORUM

Rhee CH, Choi YK, Kim YI, Kim SS, Park SB, Son WS

Correlation between skeletal and dental changes after mandibular setback surgery-first orthodontic treatment: Cone-beam computed tomography-generated half-cephalograms.

- *Korean J Orthod* 2015;45:59-65.

I appreciate the authors for this informative and well-written article. I have a few questions with regard to this study and surgery first approach.

Q1. According to Table 3 and 4, postoperative change in this study shows that are less than the results of other papers. There is a statistical significance but is not a great change. In this article, most of the cases involving an average of 2 mm crowding that were not extraction cases were investigated. So I think that it was quite possible to set a stable surgical occlusion. I would like to know the value of overjet and overbite at immediate-postoperative (T1).

Q2. The authors reported that larger post-surgical vertical dimension changes were related to a greater number of skeletal changes during the postoperative stage. As you mentioned, there are no specific guidelines for the setting of the surgical occlusion. Nevertheless, I am wondering if you have any guidelines to establish the surgical occlusion or to prevent the relapse after surgery. What is the more desirable; maintenance of increased vertical dimension after surgery or surgical occlusion setting considering relapse?

Q3. The authors reported the integral importance of vertical dimension control and proximal segment management to the success of surgery-first orthodontic treatment. Sagittal split ramus osteotomy (SSRO) was performed in all subjects. What do you think is more desirable between two methods (SSRO vs IVRO [intraoral vertical ramus osteotomy]) in the surgery first approach?

Questioned by

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We appreciate your valuable comments on our article. Our article began on many questions, raised by readers like you. We don't believe our article can clear all insight to all question because this study solely focused on the vertical dimension, proximal segment and skeletal measurements. However, our whole-hearted response presented below.

A1. In this study, the total number of samples were limited. Inclusion criteria were skeletal class III, mandibular setback surgery (1-jaw surgery), and non-extraction cases. That's why postoperative change was less than the other study. This meant that some of cases had a quite stable surgical occlusion after the surgery first approach. Even though most cases only showed limited postoperative change, some showed largely increased vertical dimension after surgery. As many readers know, orthodontists start the orthodontic treatment after surgery-first approach. The overjet and overbite changes were reflected by skeletal and dental

changes. So we didn't measure these. Therefore, these changes were excluded from the correlation analysis.

A2. What is the more desirable surgical occlusion for the surgery first approach? It is a very difficult question. From this study and others, we'd like to let the readers know that, as the vertical occlusal dimension increases after surgery, the position of the mandible becomes less predictable at the post-treatment stage. When we consider the post-operative stability, the results are reflected by the extent of movement, the type and materials of fixation, the mandibular plane angle, control of the proximal segment, soft-tissue and muscular tension, preoperative age, the skill of the surgeon, and the increased vertical dimension (even we made for the surgery first approach). Within these various factors, we believe that we can

effectively control the factor related dentition. The more we reduce the risk, the more predictable the results are. Maybe the best guideline for setting of the surgical occlusion could be the thorough and in depth pre-surgical orthodontic treatment.

A3. In this study, all of patients were undergone by SSRO. We didn't compare our result with the other surgical technique. Further study should be needed.

Replied by

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