

while the other studies have follow-up after the end of ortho treatment.⁵⁻⁸

- 2) The short-term data were pooled with longer-term data that ranged from 2 to 6 years at follow-up. Moreover, the observation time points differ among the studies. Three studies report the maximum expansion point at the end of the distraction period being their T2²⁻⁴ while other studies report an expansion point taken at the end of ortho treatment.⁵⁻⁷ The study of Kurt et al.⁵ recruited in the Surgically Assisted Rapid Palatal Expansion (SARPE) group 4 patients who underwent orthopedic expansion that had failed.

The meta-analysis would have benefited from an objective of differentiating short-term and long-term dental and skeletal changes. Our prospective study⁹ who include 38 consecutively treated patients with SARPE was an attempt to clarify these points.

Best regards,

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Long-term dental and skeletal changes following SARPE

In Reply:

We are grateful for the opportunity to start a debate on our systematic review and meta-analysis.¹ We

appreciate the interest of Dr. Chamberland in our article¹ published in the December issue of this journal and we wish to discuss some aspects raised in his evaluation. His letter raised some interesting points worthy to be discussed by the scientific community.

As to the point raised that the follow-up of at least 1 year after expansion does not differentiate studies where orthodontic treatment was completed from those where it was not, leading to final dental changes imprecisely estimated, we believe that this inclusion criteria did not impair our results. Specifically, the study of Byloff and Mossaz² described a follow-up of at least 12 month post-surgery (after fixed appliance therapy) and Berger et al.³ described a follow-up of 1 year after removal of the retention appliance before any additional orthodontic treatment. Only Koudstaal et al.⁴ reported a follow-up of 1 year after treatment and did not specify if it was 1 year after expansion or 1 year after orthodontic treatment. The other studies⁵⁻⁷ presented a follow-up after the end of orthodontic treatment. Most importantly, from all comparisons performed in the meta-analysis, only one presented any level of heterogeneity ($I^2 > 0\%$) among the studies, which means that this variable, which could be a confounder, in fact was statistically proved as not having influenced the results among the included studies.

As to observation time points differing among the studies, this variable was not considered a problem either as the heterogeneity among studies was very low, as mentioned before. And the heterogeneity measurement shows to what extent the results of studies are consistent.⁸ The lower the heterogeneity, the more consistent the results are.

Our inclusion criteria also prevented us from including the interesting and contributive study from Dr. Chamberland⁹ in our systematic review and meta-analysis, as we did not include studies where patients presented any history of another craniofacial surgery. In the referenced article, 28 patients were submitted to a second surgical phase. Additionally, the results from this study are very similar to the results from our meta-analysis, which further validate our data.

We would like to thank Dr. Chamberland for the opportunity of this discussion, but we cannot agree with him that our published article does not meet the level of research quality or methodological soundness that a meta-analysis should have. According to the Cochrane Handbook,⁸ the process of undertaking a systematic review involves a sequence of decisions and while many of these decisions are clearly objective and non-contentious, some will be somewhat arbitrary or unclear because there is no consensus about them on the literature. In a systematic review or meta-analysis, the inclusion criteria for selection of studies are a prerogative of the authors and abiding by

them in a transparent way is a sign of methodological soundness.

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Differential diagnosis of the complex regional pain syndrome

To the Editor:

We have read the case report of Heir et al.¹ diagnosing complex regional pain syndrome in 2 patients with interest. In the first case the patient described a feeling "like nerve cut" while apicoectomy of her right maxillary quadrant was performed. The pain started after the procedure and 6 month later it spread to the shoulder, the arm, and the hand. The patient described her right hand being colder than the left hand and a darkened hue of the skin of the same hand.

The first patient had symptoms identical to the symptoms of the patients with thoracic outlet syndrome.^{2,3} Again, the complaints of the upper extremity which started 6 months later, made us think that these are two different phenomena. The neurologic examination was not clearly presented; especially the increase or decrease of the deep tendon reflexes of the right upper extremity was not stated. The cornea reflex is the most important examination sign in patients with trigeminal nerve injury. The afferent of this reflex is the trigeminal nerve and the efferent the fascial nerve. No information was given about the patient's corneal reflex either. Electromyography (EMG) and Doppler ultrasound of subclavian blood vessels had not been performed, thus, showing that the thoracic outlet syndrome was not excluded.^{4,6} Also, in patients with this kind of complaints, cervical disk herniations, cervical and brain pathologies can be detected.⁷ In order to differentiate these diagnoses; EMG, median somatosensory evoked potential or magnetic resonance imaging of cervical or brain should have been performed. The injury of the trigeminal nerve could have been evaluated with trigeminal somatosensory evoked potential test.^{8,9} Some unanswered questions of this patient's diagnosis remained in the minds of us the readers. Therefore, in patients with similar complaints we recommend the tests discussed above to be performed in accordance with physical examination.

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