

## **Erbium-Yag Laser Simultaneously with Rapid Maxillary Expansion... Add Value?**

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**Received:** December 19, 2016; **Published:** December 20, 2016

For many decades, Orthodontists faced a frequently question in their clinics, is the maxillary expansion considered reliable and have effective and stable results with young adult patients whose permanent dentitions have already completed and midpalatal sutures are nearly to fuse? The answer for this common question is still a big dilemma until now and may spark many controversies.

After I searched in wide range medical literatures about this subject, I found conflicting views about the matter, some researchers found that rapid maxillary expansion will be effective until the age of 15 years old, and after that we definitely cannot make any trusted results and the need for the invasive surgically assisting methods to have good and stable results will be necessity. Whereas others emphasize that the midpalatal suture will stay expandable until 35 years old or even more.

So, what can we do with these irreconcilable opinions in our clinics? I, in my turn, tried to find the third way, it represented the compromised way between the traumatic surgery intervention and the conservative traditional expansion treatment with rapid palatal expansion solely. The Idea was about making the less invasive interventions, with less time, effort, and pain, by making facilitative perforations along the mid palatal suture by using of Erbium-Yag Laser irradiation simultaneously with applying the rapid expanders for young adult patients whose sutures are nearly to fused or almost fused.

The good news is that we got the results we desire, and the treatment offered better skeletal and more stable results when compared to traditional expansion treatments and was more comfortable and acceptable when compared to surgically assisted treatments, and this conclusion was proved clinically and by using of frontal cephalograms and dental casts.

In my opinion, the most logical explaining for this conclusion is that the perforations made by laser pulses can facilitate the separation of maxillae two halves by physical mechanism. in addition to its possible role in inducing and motivating the inflammatory process along the midpalatal suture which can make the bone remodeling and suture separation easier and more effective.

I ask every clinician to try this new employment of the Erbium-YAG laser, and by experience we can try to expand the irradiated area to the Piriformis fossa and other anatomical landmark so we can achieve better clinical results.



Mucosal Perforations



Osteal Perforations



Before



After

Volume 6 Issue 5 December 2016  
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