Relapse of mandibular anterior crowding occurs in many well-treated cases, though they have bicuspid extraction, non-extraction treatment, third molar removal, non-removal or agenesis. Why? Is it related to (a) form and function, (b) tooth-mass issues, (c) occlusion, (d) temporomandibular relationship, (e) arch length discrepancy, (f) heredity, (g) orofacial musculature, (h) intra-oral forces, (i) extraoral forces or (j) oral habits? Or is it a combination of all the above?

The literature is filled with quality research studies attempting to discover answers to why relapse occurs, and despite decades of research, lower anterior crowding is still unpredictable and variable and no predictors have been useful predictors (Little, 1999, p. 191).

Form and function certainly underlie growth and development in the craniofacial skeleton and the role that the biological environment plays. According to Carlson (1999), the “form-function” principle of craniofacial biology in general was attractive but primarily to account for the factors that may have influenced broad morphological variation and change associated with the evolution of the whole complex. Carlson added that the form-function principle is much more effective in explaining variations of craniofacial form, growth and treatment outcomes associated with causes of skeletal discrepancies and malocclusion.

So where does the discussion of lower incisor crowding end? Is the problem multifactorial, a product of improper orthodontic treatment modalities (or techniques), form vs. function, does genetics play a large part in creating or solving the problem?

We can go on and on discussing virtues of the many possibilities and causative factors involved with postretention relapse of lower incisor crowding, but here we are in the 21st century and cannot provide an absolute answer to the riddle of posttreatment stability. It is still an important objective but also still a scar of orthodontics.

Answers may never be absolutely identified, which, of course, begs consideration for some form of indefinite re-treatment in almost all cases. However, we shouldn’t feel totally alone with regard to our knowledge (or lack of knowledge) for an absolute answer to why relapse of postretention tooth movement occurs because, according to our medical colleagues at the Mayo Clinic (n.d.), even after years of research, physicians still have no cure for the common cold either.

The literature is filled with quality research studies attempting to discover answers to why relapse occurs, and despite decades of research, lower anterior crowding is still unpredictable...

References

Corrections
Ortho Tribune strives to maintain the utmost accuracy in its news and clinical reports. If you find a factual error or content that requires clarification, please report the details to Managing Editor Sierra Rendon at s.rendon@dental-tribune.com.

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