Letters

Rapid maxillary expansion

Most of your readers would agree that Handelman proved his point that alveolar expansion can be used to avoid surgery when correcting crossbites in adults. (Handelman CS. Nonsurgical rapid maxillary expansion in adults: A clinical evaluation. Angle Orthod 1997; 67(4):291-320.) Unfortunately, we cannot judge the reliability of the method because the five cases presented were "selected," but at least they avoided unnecessary trauma.

Handelman recommends a slower rate than Haas's 2 mm per week, "in order to avoid complications." He goes on to report that "turning every other day will also produce successful expansion." This amounts to 1 mm per week, a rate I have been recommending since 1968, although I prefer 1/8 of a full revolution each day. This rate is easier for the patient to remember, and it avoids crushing of the periodontal membrane (1/8 mm thick) at each 1/4 opening.

Of more importance, *semi-rapid expansion*,[1] as I call it, has proved very stable[2] and will separate the suture in most adults.[3]

I think that this is because it provides more force than "slow" expansion of 1/3 to 1/2 mm per week, yet not so much force that the periodontal membrane or root surface is damaged. This may give more time for the salts to be removed from the interlocking extensions of the sutures, and once separation has been achieved, there is time for a bony matrix to be deposited, rather than under-oxygenated scar tissue that requires subsequent reorganization.

The comments of Vanarsdall (in the commentary following the article) appear defensive; it is possibly unwise to condemn 8 to 10 mm expansion without quoting the evidence.

Northway's paper provides us with some much-needed information. (Northway WM, Meade JB. Surgically assisted rapid maxillary expansion: A comparison of technique, response, and stability. Angle Orthod 1997;67(4):309-320.) His finding that expansion is predictable seems justified, but his comments on stability should be viewed with caution, as many of the patients were still in retention.

Northway expresses a preference for a "surgical alternative" in order to reduce periodontal damage, but some might view the surgery itself as being more traumatic.

I was interested in his conviction that greater tongue space might improve stability. It is a belief I share, and my clinical experience suggests that an intermolar width (at the gum margin) of over 40 mm offers more stable results. His concern that nonsurgically assisted rapid expansion will result "in an extended period of pain or severe discomfort" can be avoided if the semi-rapid rate is used.

I encourage others to research this rate and degree of opening. Perhaps I should mention that 1 mm per week is near the lowest speed that will separate the suture. The actual rate of opening should be carefully monitored.

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References

1. Mew JRC. Semi-rapid expansion. Brit Dent J, 1977;143:301-306.
2. Mew JRC. Relapse following maxillary expansion: A study of 25 consecutive cases. Am J Orthod, 1983;83:56-61.
3. Personal communication, Richard Scavo.