

Letter to the Editor

To: Editor, *The Angle Orthodontist*

Dear Editor,

My father was an orthodontist who trained in the 1920s when it was routine to expand the maxilla at the age of four or five. After he died, I studied his records and did some additional research.

At University, I was involved with the work of Timms and Moss¹ which put me off RPE forever. I created the Biobloc Stage 1 expansion appliance in the 1970's and I have not found reason to change it since, although I replaced my original Adams clasps with Crozat clasps.

The reason I am writing now is because many orthodontists tell me that it is not possible to expand the adult maxilla without bone screws or some sort of surgery. However, the Stage 1 has proved able to expand the maxilla in almost all adults with little or no trauma or damage. It does this by applying equal pressure on the soft tissues and the teeth and using the semi-rapid rate of expansion.

Occasionally, there will be sore spots beside a clasped molar around the fifth week but simple easing or slowing the expansion for a few days is usually all that is required to avoid this. The intermittent widening of 1/16th of a millimeter on each side never occludes the periodontal blood supply which frequently occurs when even light spring forces are used. The constant contact on the palatal mucosa remodels the bone underneath creating a near ideally shaped vault.

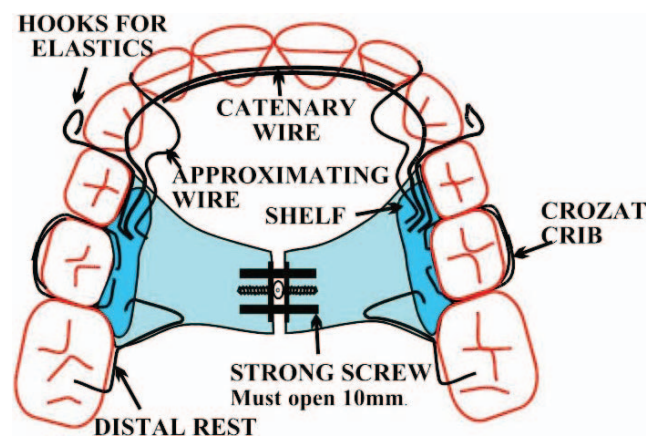


Figure 1.

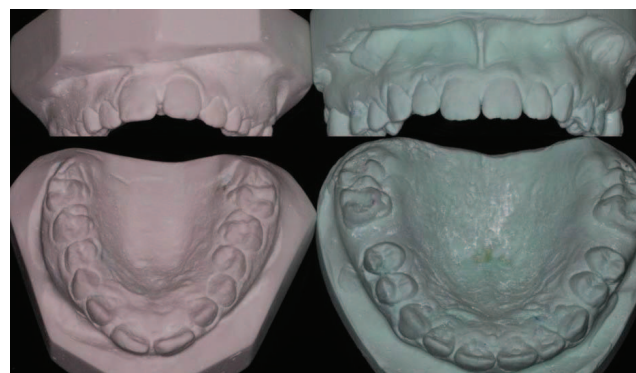


Figure 2.

In addition, the palatal shelves, placed on each side, assist in retaining the appliance without opening the bite. At the same time, they centralize the mandible and allow it to slide forward. As you may know, I also use 'Catenary' wires to reduce the 'Indicator Line' so that the mandible can be brought forward with the Stage 3 appliance without increasing the vertical height.

I described the Stage 1 appliance in 1977² (Figure 1) and have used it to widen the maxilla of both children and adults since. I subsequently researched its stability in 1983,³ finding that there was no subsequent relapse although I was using less expansion than the 10 to 15mm I provide now (before and after expansion, Figure 2).

Several orthodontists have modified my original design to create new appliances, but most recommend adjunctive surgery for adults. I am currently concerned with the amount of surgery which I see as unnecessary and appreciate being able to communicate my thoughts in *The Angle Orthodontist*.

Best wishes,

Professor John Mew

REFERENCES

1. Timms DJ, Moss JP. An histological investigation into the effects of rapid maxillary expansion on the teeth and their supporting tissues. *Trans Eur Orthod Soc.* 1971; 263-271.
2. Mew JR. Semi-rapid maxillary expansion. *Brit Dent J.* 1977; 143: 301-306.
3. Mew J. Relapse following maxillary expansion: A study of 25 consecutive cases. *Am J Orthod.* 1983; 83: 56-61.