

Unilaterally Reinforced Facebow for Asymmetrical Correction

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Certain Class II malocclusions are clearly asymmetrical, so that the maxillary molars need to be distalized more on one side than on the other. In this type of case, if I use a low-pull headgear, I install a facebow with short, symmetrical external arms, carefully adjusting the angles between the internal and external bows.

Once the patient has become accustomed to the headgear, after six to eight weeks, I solder a rigid bar between the internal and external bows on the side that needs the most distalization (Fig. 1).

Fabrication and Wear

The bars are made of .081" stainless steel wire cut into lengths of approximately 15mm. To construct the asymmetrical facebow, one end of a bar is ground flat and welded to the external bow. The assembly is tried in the mouth, to make sure it does not irritate the lips, and carefully removed. Both ends of the bar are then coated with silver solder, rounded, and polished.

The patient should continue to wear the headgear with the same force and duration as before until the molars are symmetrically distalized.

Case Report

An 11-year-old female presented with a Class II, division 1 malocclusion that was much more severe on the right side, considerable anterior crowding, a deep overbite, and persistent habits (Fig. 2). Because of the patient's favorable facial pattern and thin, delicate lips, I decided to treat the case without extractions.

Treatment was begun with a standard low-pull headgear, exerting 800g of force per side and worn 14 hours per day. Six weeks later, the facebow was reinforced with a soldered bar on the right side; the patient continued to wear the

headgear as before.

After six months of treatment, both arches were bonded with .022" × .028" Roth-prescription preadjusted edgewise appliances (Fig. 3). The asymmetrical headgear was continued for nine more months, until some overcorrection

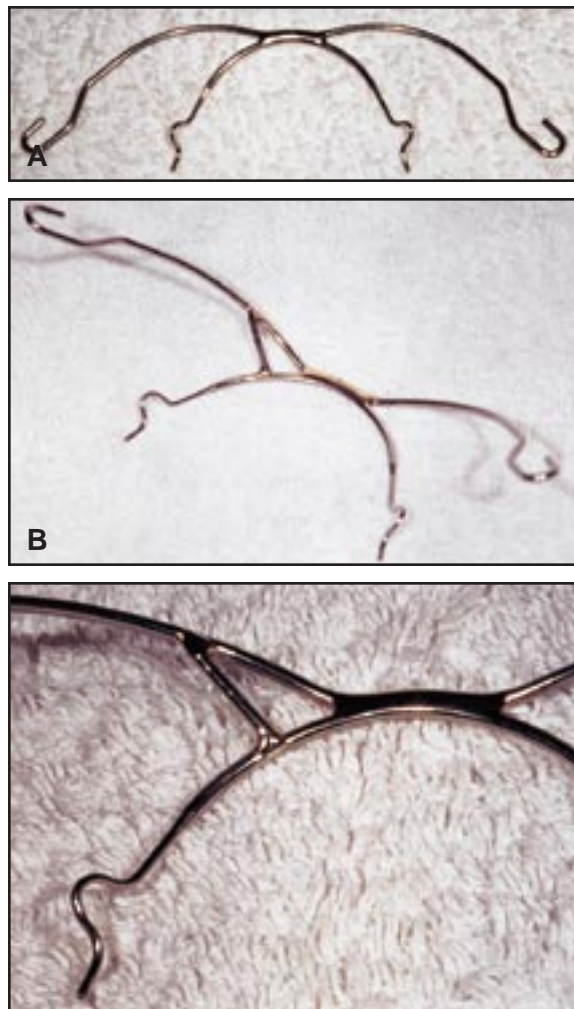


Fig. 1 A. Conventional facebow. B. After unilateral reinforcement.



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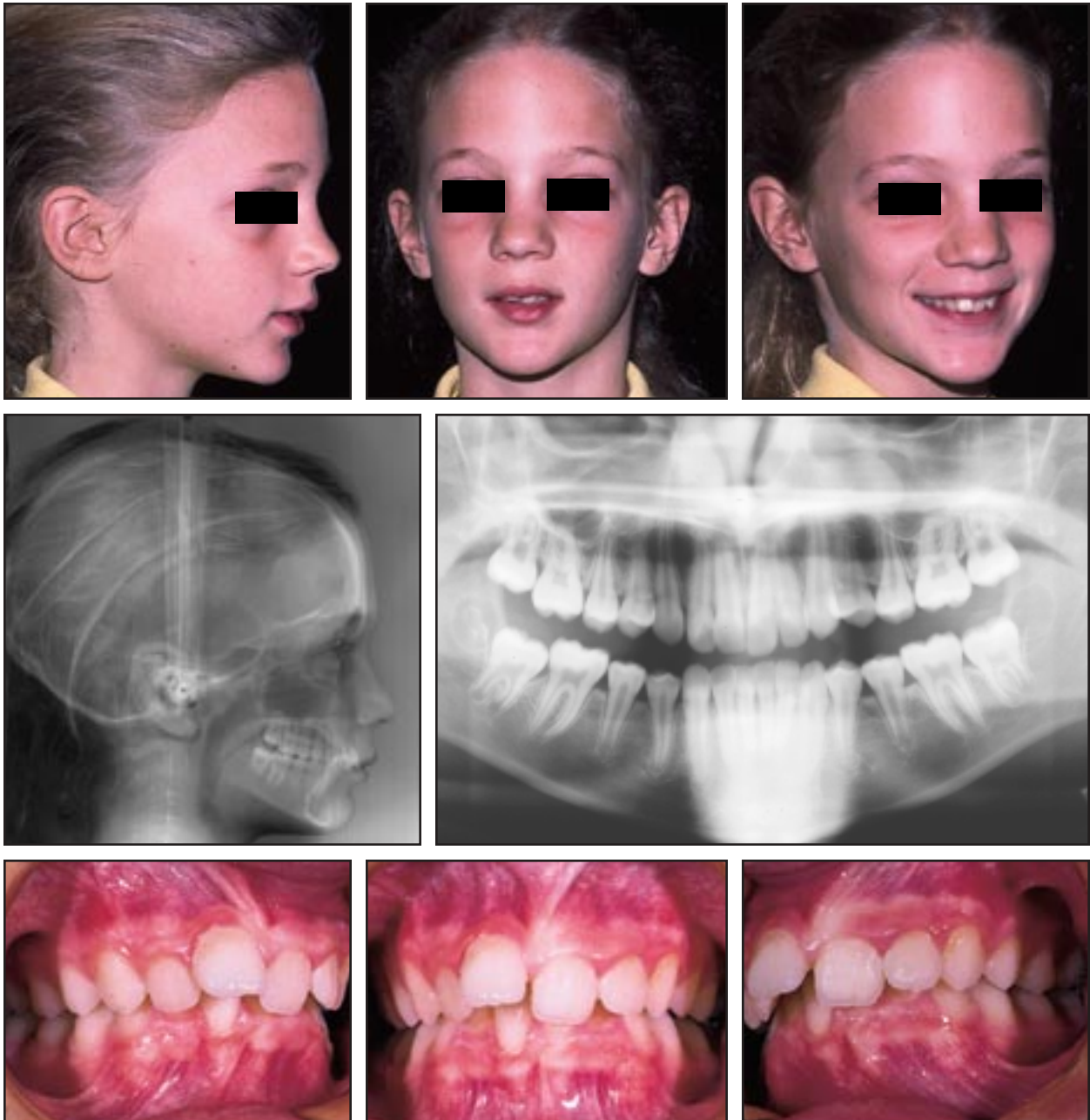


Fig. 2 11-year-old female with asymmetrical Class II, division 1 malocclusion before treatment (superimposable profile photographs by radiologist Dr. Gerard Pasquet).

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was achieved on the right side. Symmetrical Class II elastics were used for finishing (Fig. 4). Headgear wear was gradually reduced to five nights a week, and soon after to two nights a week.

After 24 months of treatment, all fixed appliances were removed (Fig. 5). Removable Hawley retainers were worn in both arches for an additional year.

Conclusion

In the opinion of Dr. Penin (Caen, France), the reinforced bow bends less under the force of traction than the bow on the opposite side, thus increasing the pressure on the reinforced side. Whatever the explanation, I have found that the asymmetrical facebow works in clinical practice. □

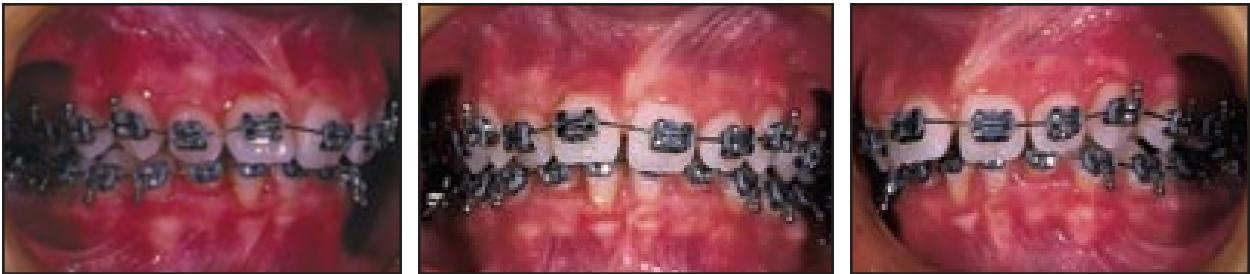


Fig. 3 Placement of fixed appliances after six months of asymmetrical headgear treatment.



Fig. 4 Treatment progress.

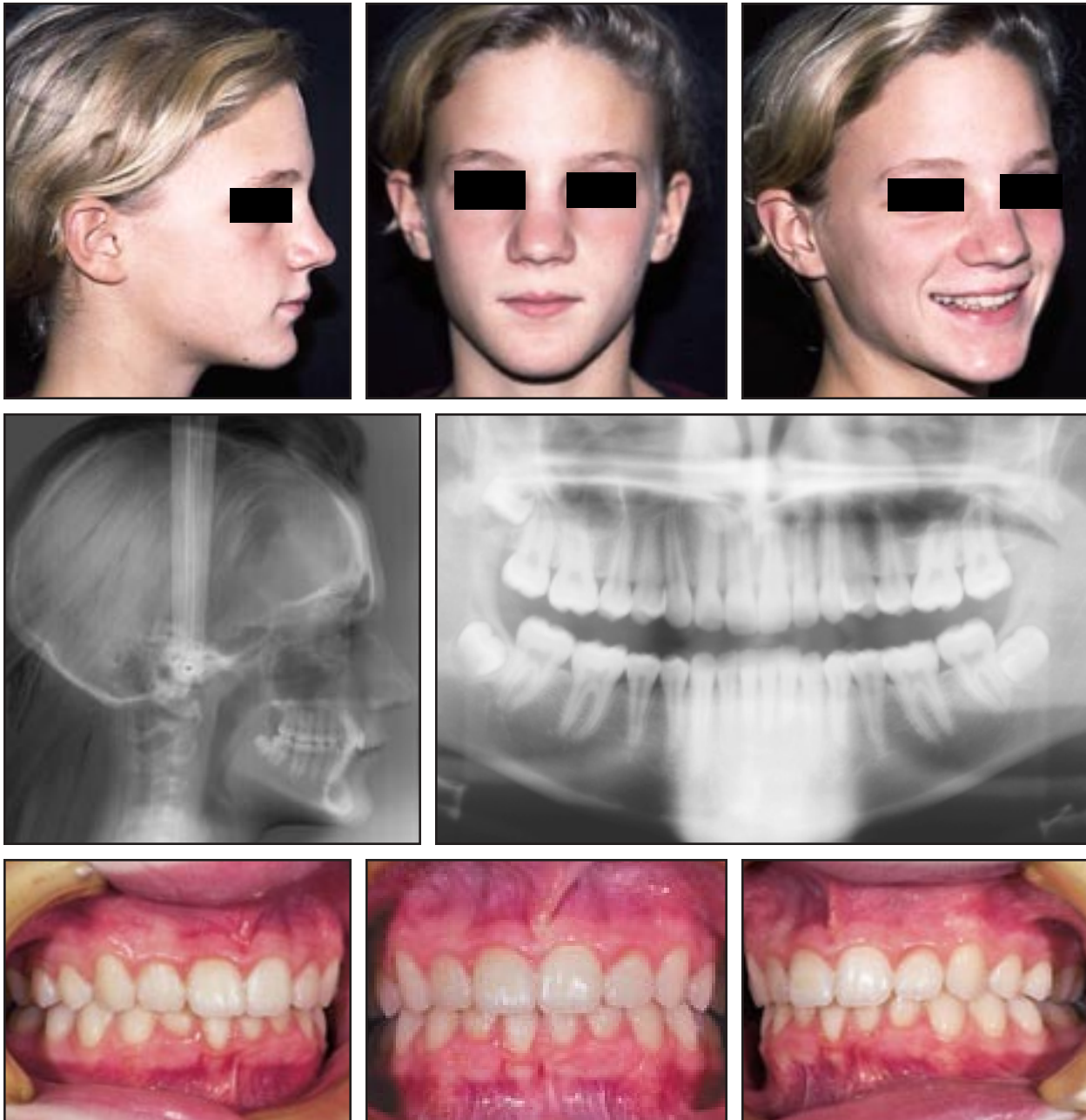


Fig. 5 Patient after 24 months of active treatment.