

Since adult patients have no further growth, then the best solution both orthodontically and esthetically is a surgical mandibular advancement combined with pre and post-operative orthodontics. In this case this surgical procedure will both advance the mandible and open the deep bite.



MAND in the normal position ▲

MAND advanced “end to end” ▲

TREATMENT PLAN

The orthodontic and surgical treatment plan must be made in conjunction with the oral surgeon and it is the surgeon who makes the final decision as to what surgical procedures will be used.

Orthodontic treatment plan: Level all the teeth in both arches using the SWA (sch 2) and the usual wire series until the 21x25 steel wires are in place. It is not needed nor indicated to try to open the bite. This is done during the surgery. After surgery, the case will be finished with the usual protocol as in a “normal” orthodontic treatment.

4TH MONTH

MAX and MAND: N. 20x20 HA NiTi.



6TH MONTH

MAX & MAND: 19x25 HA NiTi wires. Notice the deep bite and increased OJ (this would be impossible to correct “non-extraction” and have long term stability and proper condylar function).





MAX & MAND: same 19x25 posted steel. Begin finishing with elastics. Then, re-bracketing of various teeth and re-leveling.



17TH MONTH

After the re-bracketing.

MAX & MAND: 19x25 HA NiTi with L-L chain M_I to M_I. 4 mm delta elastics, 24/24, are used to settle-in the occlusion.

Case is finished in an almost end-to-end position because there is always a rebound of the deep bite by 1–2 mm.



2 YEARS AFTER BRACES REMOVED

Notice healthy attached gingiva.



Impacted Premolar 45

For complete case: see the 1st case (Ve) in Chapter 16/6: “Maxillary 1st Molar Distalization”.



Panoramic X-ray to verify eruption of 45. Surgical attachment with wires is bonded. Will try to save 45. Explained possible complications. Note 47 and 25 may need attention also.



16TH MONTH

Metal ligature wires from attachment pass through the gingiva and are wrapped around and tightened down on the 16 HA wire. This “flexes” the wire slightly so as to apply a light ~60 gr force to 45.



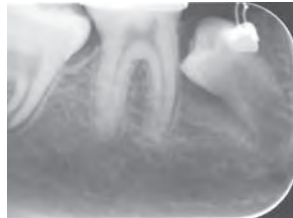
18TH MONTH

45 is moving with the light force from the 16 HA NiTi wire.
(But will the root develop properly?)

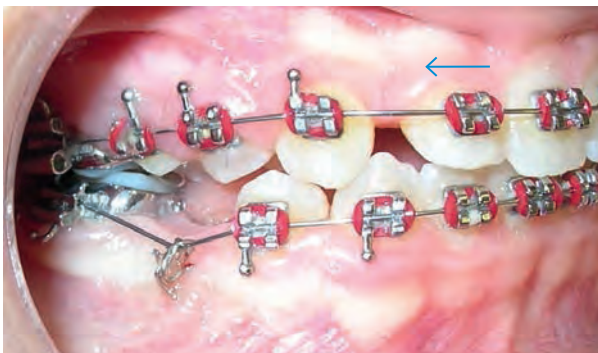
Before ▼



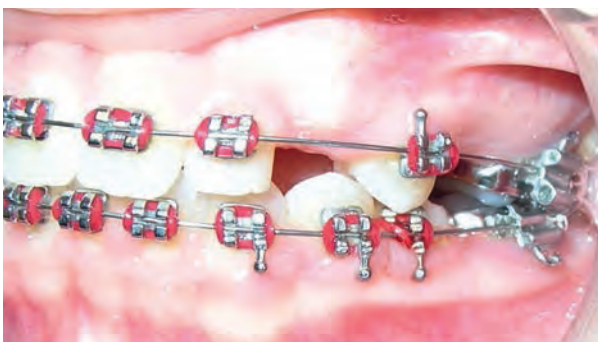
2 months after surgery ▼



2 months after surgery ▲



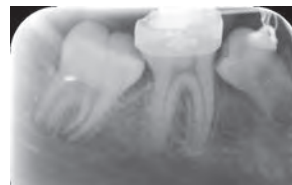
At each visit the wires of the attachment are tightened down around the archwire, thus reactivating the force.



16th month ▼



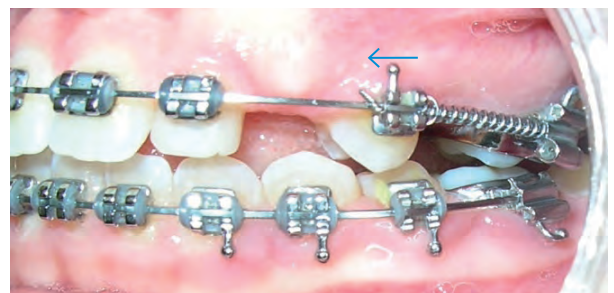
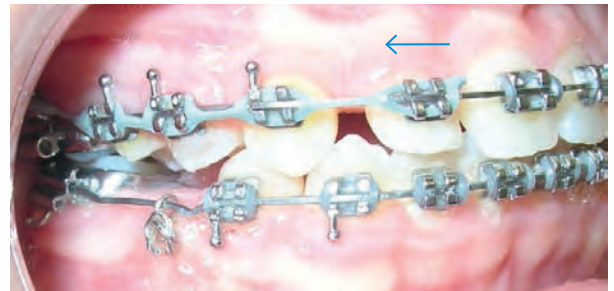
18th month ▼



19th month ▲

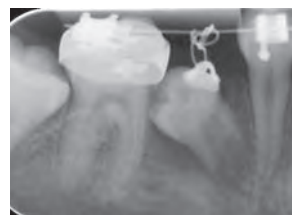
20TH MONTH

45 is starting to erupt.



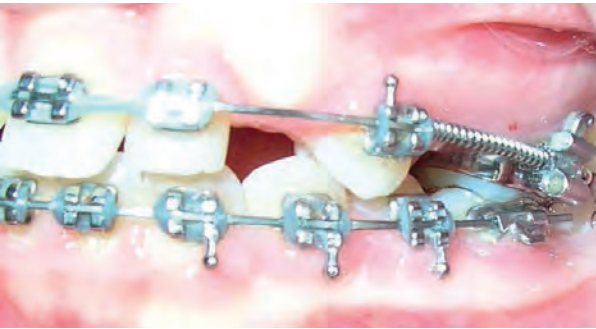
MAX: 19x25 steel, L-L CH 16 to 12. O-C spring NiTi for 25 which has started to erupt.

MAND: 20x20 HA NiTi. 45 is starting to push through the surface.



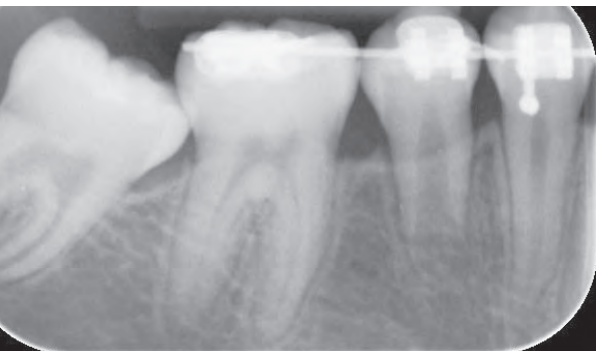
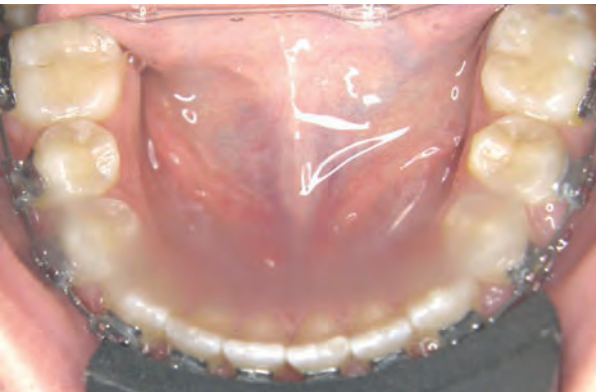
22ND MONTH

45 is bracketed and tied in to the wire.

**23RD MONTH**

MAND: Removed band on 46 (so it will not block-out 47) and placed a tube.

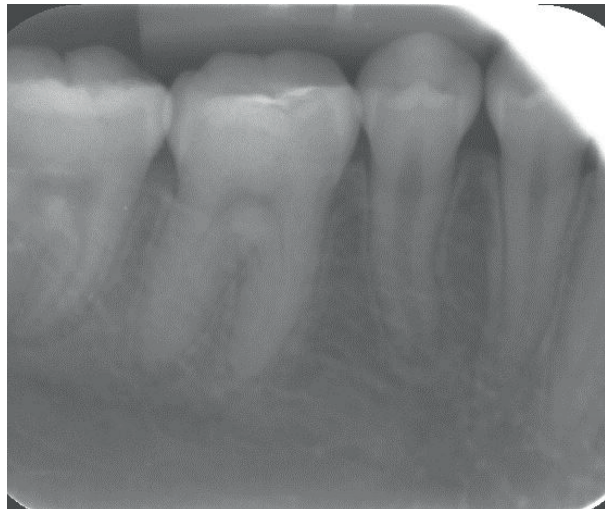
Root of 45 continues to slowly develop.

**27TH MONTH**

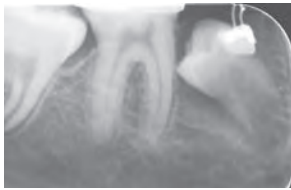
Root of 45 continues to form.



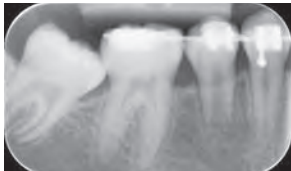
It is apparent that 45 has been successfully saved (the root continues to form normally and the apex closes).



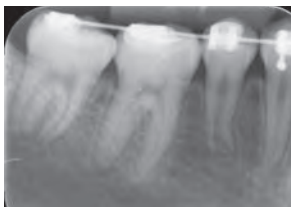
18th month ▼



20th month ▼



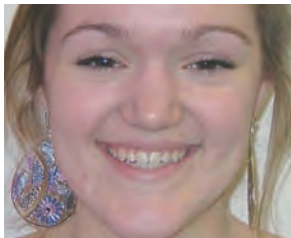
23rd month ▲



24th month ▲



27th month ▼



30th month ▼



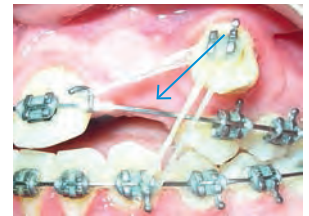
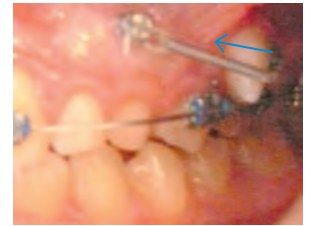
CASE: female, 13 years old

12 and 22 are agenetic.

23 is very ectopic and is located distal to 24.

For the complete case: see the last case in chapter 25: Mini-screw / TAD.

2nd month ▼



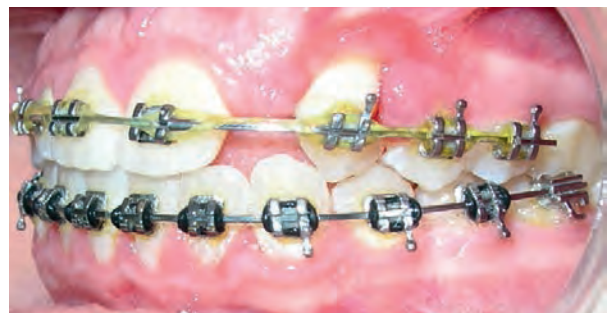
3rd month ▲

6th month ▲

8th month ▼



11th month ▼



13th month ▲

Brackets should be bonded with the ligatures already attached to the gingival tie-wings. Now it is an easy task to simply place the wire in the slots and close the ligatures on the upper tie-wings to activate the wire.



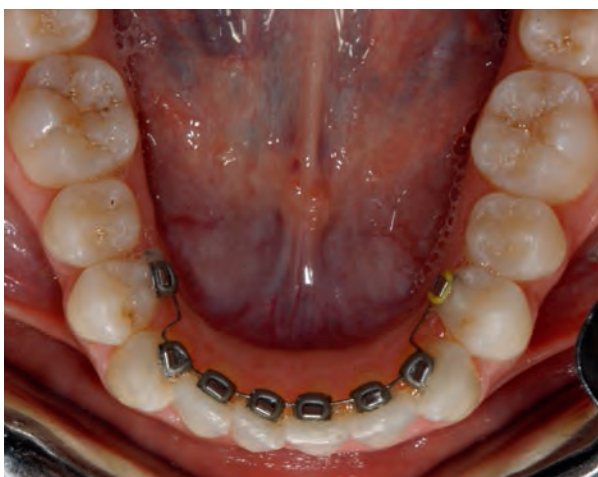
12 NiTi with “distal-bends” and composite so the wire doesn't slide out of the brackets. The *Slide* ligatures are closed. Allow the wire to work for 1–2 months before beginning slicing. ♥

The goal is to align the front teeth without changing the posterior occlusion. To stabilize the posterior occlusion, the 4s and the 5s can be temporarily bonded together with a flow-type composite.



2 MONTHS LATER

Begin stripping. The same ligatures can remain in place for about 4 months.



3RD MONTH

14 NiTi. Stripping.



5TH MONTH

Stripping.



Beginning.

