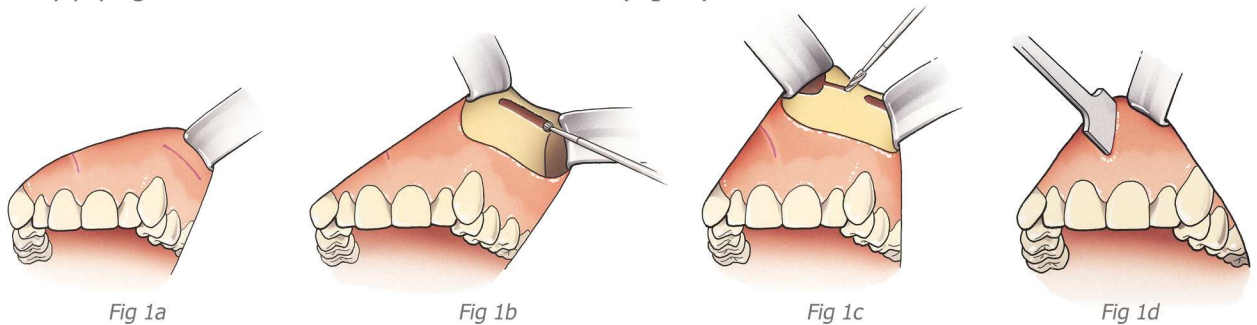


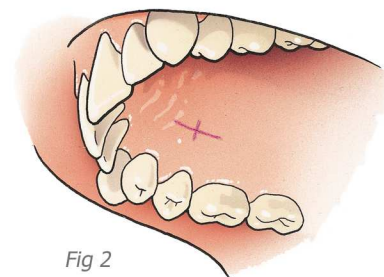
Trans Palatal Distractor - TPD Classic

Step-by-step procedure

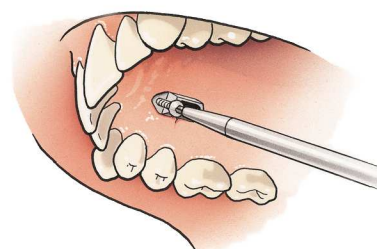
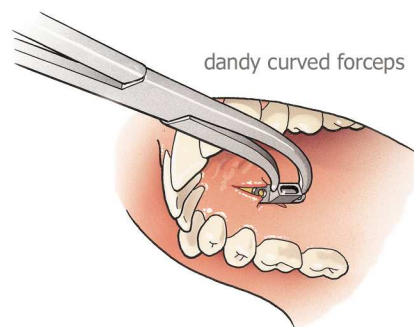
1 Corticotomies are performed as usual for SA-RPE, with transection of the median, anterior and lateral support (Fig 1a-d). The median support is split by a median buccal approach. Septal release is only performed in unilateral expansion. Bleeding from a small artery within the osseous triangle forming the lateral nasal wall and lateral maxillary walls frequently occurs and must be treated adequately to avoid postoperative bleeding problems. The transection can be performed with a round bur (preferably 33 mm to allow drainage into the sinus) for the lateral support, a small Lindemann bur or a smaller round bur for the anterior support, a 1 cm wide sharp osteotome for the median support. Mobilisation of the segments is done by prying motions with the 1 cm wide osteotome (Fig 1d).



2 After application of local anaesthesia with a vasoconstrictor, two incisions of 1 cm long are made in the palatal gingival over the roots of the second premolars (3/2 expansion canine/first molar) or the first molars (parallel expansion when the pterygo-maxillary junction is also released) (Fig 2). A small relieving incision is made perpendicular to end in the middle of the first incision.



3 The abutment plates (Ref 03-800A) are placed subperiosteally, on the bone surface (Fig 3). Care should be taken to place the boxlike extensions 30° on the base plate, in a horizontal fashion and opposite to each other. The abutment plates are marked left (L) and right (R). The plates are fixed with 7 mm monocortical self drilling screws of 2,0 mm diameter (Ref 70-707S) (Fig 4).



Trans Palatal Distractor - TPD Classic

Step-by-step procedure

- 4 One resorbable suture on the posterior incision line is a safe measure against postoperative bleeding from the palatal branches (Fig 5).

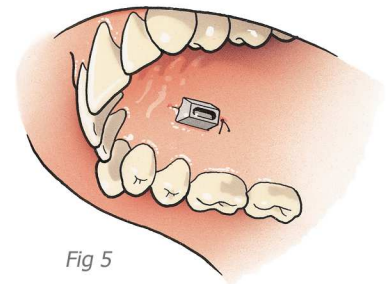


Fig 5

- 5 The proper module is installed preoperatively (Fig 6). Placement requires some prying of the segments and adjusting of the wings of the module. The module should be placed such that expansion will occur when the patient rotates from cranially to caudally. This means with the holes for the blocking screw to the right. The module is secured with a blocking screw (Ref 99-100S). This is best done by adjusting the screw in the bore with the internal screwdriver only (Ref 99-909S), **without** the screwdriver handpiece (Ref 99-901A) to avoid damaging the screw-thread in the module (Fig 7).

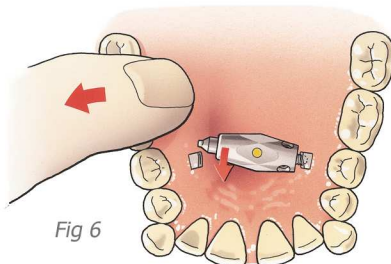


Fig 6

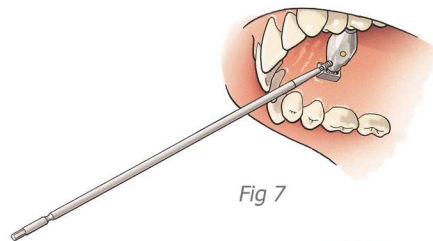


Fig 7

- 6 The module is preferably fixed bilaterally to the bicuspids with a fine titanium ligature for safety reasons. Small holes are for that purpose provided in the distraction screws (Fig 8).

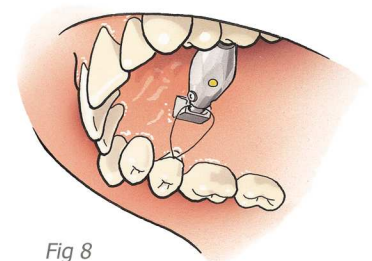


Fig 8

7 Activation

The patient is asked to activate the TPD Classic 1/3 mm (1 colour code) twice a day with the patient key (Ref 03-950S) by turning it downwards till the next colour code appears. Colour codes are red, yellow and blue (3 colour codes = 1 full turn = 1 mm.).

Attention using of the patient key

Bring the key head over the module, with the handle close to the upper incisors and pull downwards till the handle touch the lower teeth (Fig 9).

Remove the key and turn the key head (180°).

Bring the key head again over the module, and repeat to pull downwards till the next colour code appears.

In difficult cases (restricted mouth opening) the hinge key (Ref 03-951A) can be useful (Fig 10).

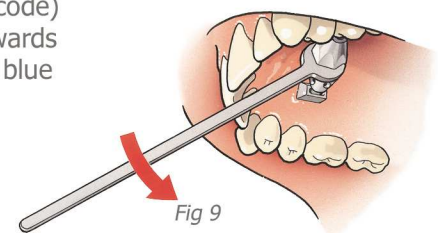


Fig 9

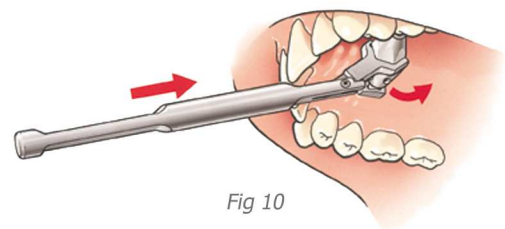


Fig 10

- 8 The module can easily be exchanged for a larger model when seemed necessary.

Trans Palatal Distractor - TPD Classic

Step-by-step procedure

9) Achieved expansion period

Once the necessary expansion is achieved, the stored blocking screw (Ref 99-100S) must be inserted in one of the three boreholes of the TPD Classic distraction module, by means of the small screwdriver (Ref 99-101A).

Control after the first stabilization if the osteosynthesis screws are still fixed. Retightening is recommended under local anesthesia.

Attention: Before inserting the blocking screw, clean accurately the insertion hole. **Do not tighten the blocking screw hardly** to avoid damaging the screw-thread of TPD Classic distraction module. Beware to insert the blocking screw if some friction occurs. In case of any friction, turn slowly the screwdriver from right to left and back till the correct entrance is found in the thread of the screw hole, and there is no friction feeling while inserting the blocking screw.

10) The consolidation period should be at least 4 months.

11) Orthodontic treatment

Arch wire appliance is **needed** to control a perfect dental arch and avoids a U-shape arch phenomena. This to control the expansion less or more anterior, or posterior. Orthodontic alignment can start 1 month or earlier after the end of activation.

12) Removal of the TPD Classic

- Apply local anesthesia.
- Clean carefully the insert hole in the blocking screw, before inserting the small screwdriver (Ref 99-101A).
- Unscrew the blocking screw (Ref 99-100S).
- De-activate the distraction module of the TPD Classic with the patient key (Ref 03-950S) and remove.
- Unscrew the osteosynthesis screws (Ref 70-707S) and remove the abutment plates (Ref 03-800A).
- In case distraction rod is damaged by the blocking screw, the rod need to be cut.