

any forces against the teeth, but is much more costly than a tooth-anchored device. A tooth-anchored device can be cemented on the teeth before, and timewise completely independent from the surgical procedure in the orthodontists office or intraoperatively after completion of the osteotomy. A bone-anchored device is typically inserted after the osteotomy. Some bone-anchored distractors are modular with removable foot-plates. If this is the case, the foot-plates may be fixed (screwed) to the palate prior to the start of the osteotomy. The operation finishes with suturing the mucosa.

The widening procedure per se is a distraction osteogenesis: 1 mm transversal expansion per day is the usual and accepted rate. The distraction devices are activated two to four times a day according to their construction. After the desired expansion is reached, a long retention phase of 3 months or more is mandatory, because of high relapse rates for transverse expansions and the time needed for complete mineralization and remodelling of the callus. For retention purposes the relatively big and uncomfortable bone-anchored devices may be replaced by slim, low-profile tooth-anchored orthodontic appliances.



Fig 7.3.2-4a-b

- a** Lower facial width before distraction.
- b** Lower facial width after distraction and orthodontic treatment.

