Technique for expanding the atrophic alveolar ridge

- Lateral bone condensation technique – lateral compacting of the trabeculae in poor quality bone, greatly improving primary stability
- Technique is less traumatic for the patient than working with a hammer and chisel
The coronal part of the expander is smooth, only the initial part being threaded. When the smooth part comes into contact with the corticalis, instead of penetrating into it, it displaces it, facilitating lateral expansion.

Uses an implantology micromotor for ridge expansion. Maximum control of the direction of insertion and of the torque (screwing power).

Use of the ratchet in the last stage of insertion of the expanders. It is possible to make a half or quarter turn at a time.

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**CLINICAL CASES**

**EXPANSION OF AN ATROPHIC ALVEOLAR RIDGE**

- Initial stage
- 2-mm thick ridge
- Initial osteoplasty (insert OP3) to increase the thickness of the ridge from 2 to 3 mm
- Crestal osteotomy with 0.35 mm thick OT7S-4 insert
- Crestal osteotomy with 0.35 mm thick OT7S-4 insert

- Crestal osteotomy: maximum precision and minimum bone loss
- Introduction of 2.5 mm and 3.5 mm bone expanders in sequence
- Introduction of 2.5 mm and 3.5 mm bone expanders in sequence
- Introduction of 2.5 mm and 3.5 mm bone expanders in sequence
- X-ray of bone expanders

- End result
- X-ray of end result

The surgical gap between the two cortical surfaces is filled with a particulate bone graft taken from neighbouring areas with the OP3 insert.
**LATERAL BONE CONDENSATION**

Thickness of the ridge: 3 mm – cancellous bone quality D4

- Initial preparation of the site with IM1 insert
- Preparation of the site with IM2P insert
- Insertion of an 11.5 x 2.5 bone expander
- Bone expanders inserted – lateral bone compacting of the medullary bone, with transition from D4 to D3

- X-ray view showing expanders in place
- Coronal view showing expanders in place
- Implant sites after removal of the 11.5 x 2.5 expanders
- Insertion of 11.5 x 3.5 bone expanders
- Palatal corticalis preparation (differential implant site preparation)

- Implants in place (minor vestibular fracture in way of the central implant)
- Particulate bone graft
- Covering with resorbable membrane
- Final suture

**ALTERNATIVE TECHNIQUE TO MAXILLARY SINUS ELEVATION**

Initial CAT scan – if the implant is placed in an angled position at tooth 26, the maxillary sinus lift technique with lateral approach is not necessary

A) With X-ray guidance, pass anterior to the mesial wall of the sinus using insert IM1 (it is possible to correct the inclination) or a 1-mm bur

B) Insertion of the 2.5 and 3.5 mm bone expanders, in sequence, with simultaneous lateral bone condensing – lateral displacement of the mesial wall of the sinus

C) Placing the implants

- Particulate bone graft
- Covering with resorbable membrane
- Final suture

End result
MECTRON BONE EXPANDERS

DR. SENTINERI’S TECHNIQUE

AVAILABLE EXPANDERS
Ø x length, in mm:
2.5 x 15 2.5 x 11.5
3.5 x 15 3.5 x 11.5
4.5 x 15 4.5 x 11.5

Adapter for micromotor ADM8)
Short adapter for ratchet (ADR7)
Long adapter for ratchet (ADR16)
Ratchet

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