CORONAL ADVANCEMENT OF THE LINGUAL FLAP
through the separation of the superficial fibers of the mylohyoid muscle in guided bone regeneration

In guided bone regeneration the reliable closure of the surgical wound is one of the key elements to achieve clinical success. This is obtained by releasing the tension of the soft tissue, through the coronal advancement of the flaps. While the coronal displacement of the buccal flap is a well-established technique, the coronal advancement of the lower lingual flap is an issue still under debate, due to the presence of sensitive anatomical structures that can be potentially damaged.

This work shows the existence of a strict anatomical relationship between the mylohyoid muscle and a full-thickness lingual flap that has been elevated in the posterior mandible. This knowledge has been used by the author to set up a three-step technique for the coronal advancement of the lingual flap. The technique has been applied in seven cases of guided bone regeneration that healed uneventfully.

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1. Full thickness elevation of the lingual flap up to the mylohyoid line (view from above).
2. Laceration of the peristeme and separation of the superficial fibers.
3. The superficial fibers are stretched in a coronal direction to achieve additional release.

RESULTS: in seven cases healed uneventfully, the defects were completely restored by the regenerative procedures. No wound dehiscence occurred.

CONCLUSIONS: a sufficient coronal displacement of the flaps was achieved in all cases. An anatomical relationship of clinical interest between the mylohyoid muscle and the lingual flap is also documented.

OVERVIEW: 7 surgeries. All patients were in good general health condition, non-smokers and affected by long term alveolar ridge atrophy in the posterior mandible. Age ranging from 62y to 75y. Graft material: dried mineralized allograft (cases 1-4), mincinated allograft (cases 5-7). Membrane type: non-resorbable dPTFE Titanium reinforced (Osteogenics). Time to second surgery: 7-9 months.

FINAL RESULT: the flap is advanced coronally.

Special thanks go to Dr. Luca Giotto, head of the course “Advanced surgical and anatomical dissection” at the Anatomy of Leg (BE), for his contribution.

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