

Palatal stent on donor site after free gingival graft in gingival augmentation procedures.

Full palatal stent with mechanical retention over the incisal edge, no sutures or haemostatic agent used on donor site.

“This chairside stent design with mechanical retention over the incisal edge has excellent, durable stability. It can be prepared just before surgery and inserted immediately after harvesting the tissue, without suturing, to achieve excellent blood clot stability. This full palatal stent can be used for both smaller, single location grafts, as for larger combined grafts when a large area needs to be augmented.”

Guidelines

- Start with performing the local anaesthesia. Since the anaesthesia causes the palatum to swell slightly, it is recommended to have the swelling already at the moment of creating the stent.
- Creating the stent without the swelling might lead to a suboptimal fit of the stent.

Preparing the stent

- Use latex gloves to mix and apply the Elemental polymer. When in a soft moldable state, the polymer might adhere to nitrile gloves.
- Use boiling water or sterile saline. Cooler water may result in shortened working time, and the polymer may set faster in the mouth.



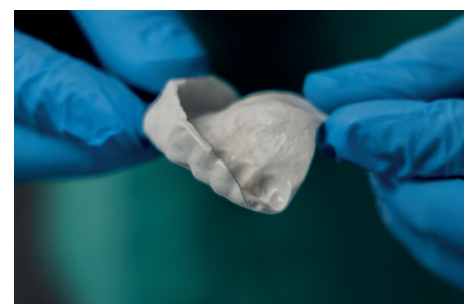
- Mould the material into a homogeneous mass.
- Using manual pressure, flatten the mass into a disc, the estimated size to cover the palate. Provide enough material to be able to extend over the incisal edge to create mechanical retention. Aim for a thickness of approx. 1-2 mm.



- If needed, briefly reheat the disc in lukewarm water to soften it before application.
- Durable mechanical retention and stability is crucial for blood clot stabilization: fold the material over the incisal edges for full-arch, stable and durable mechanical retention.



- While holding the material folded across the incisal edge, instruct the patient to press the material with the tongue against the palatum. The stent should only cover the hard palate, not the soft palate.
- Instruct the patient to bite softly into the material to create occlusion. Take the stent out and trim any excess material from the stent with scissors.
- If needed, reheat in lukewarm water before trimming and softening the edges.



- Put the stent aside to continue with the soft tissue harvesting procedure.

Harvesting the free gingival graft

- Repeat local anaesthesia on the palate if needed.
- The area of choice for harvesting the graft is between the second premolar and second molar (#5, #6, #7). Keep in mind a safety zone of about 2mm from the gingival margin. Aim for 1.5mm thickness. A shallow graft will also limit the bleeding.
- If a large graft is required; do not include the rugae in the graft. Preferably take two shorter grafts that can be combined instead of including the rugae.
- Measure: Measure the required proportion of the graft and indicate the outline of the graft with 4 puncture points.
- Outline: Perpendicular to the surface, two sets of 2 parallel incisions are performed according the previous performed indication points. Attention should be given to overlap these cuts and to maintain a constant depth.
- Undercut: One single incision with an angulation of 30° over one of the long dimension of the outline will start undermining the surface.
- Undermining: Blade flattens, to same axis as surface. Thereafter the blade is rotated even further to be almost parallel to the tissue surface and moved gradually towards the other outline measure.



Placing the stent

- After removal, place the graft on a saline-moistened gauze.
- Apply the stent immediately after the donor tissue harvesting procedure for optimal blood clot stabilization. Suturing the donor site is not necessary and no haemostatic agent is placed on the palatal wound.

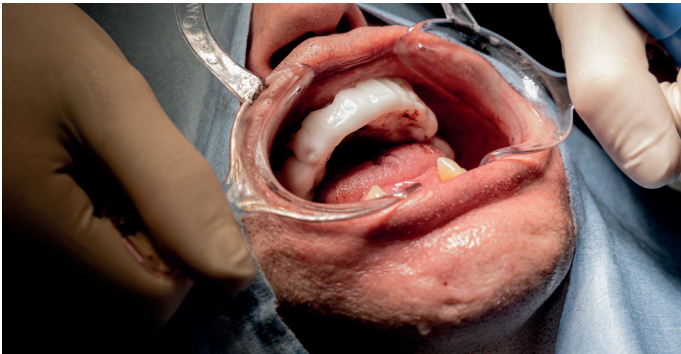


Uniforming & placing the graft

- Uniforming: de-epithelialize the graft extra-orally and remove fatty and glandular tissue with a scalpel. Aim for a uniform thickness. This is crucial for vascularization. Be careful not to overwork and perforate the graft.
- Leave the stent in place while uniforming the graft.



- The stent stays in place during the placement of the donor tissue on the recipient site, enhancing the view on the surgical site by blocking the bleeding.



- At the completion of the full surgical procedure, evaluate the bleeding tendency and reseat the stent if the bleeding has stopped.

Patient instructions

- Instruct the patient to wear the stent for 7 days, as much as possible. After 7 days, the stent can be removed by the patient.

