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Replacement of the lower incisors: immediate positioning and restoration of two Straumann® NNC Roxolid® implants

Initial findings and treatment plan
A 55-year-old male patient presented a marked mobility of the lower incisors with a shallow probing depth in a reasonably healthy periodontal condition (Fig. 1). The patient requested a reliable fixed prosthesis avoiding, if possible, the use of a removable temporary one.

The treatment plan called for the extraction of the lower incisors with the immediate placement of two Straumann® Narrow Neck CrossFit® (NNC) Roxolid® implants in sites 32–42. If primary stability was then attained, the plan was to place an immediate temporary screw-retained-bridge to replace the lower incisors.

Pre-operative planning
In line with a previously-made diagnostic wax-up, a temporary bridge, not in contact with the upper jaw, was produced (Fig. 2). A simple resin reference template was then used in order to place the bridge in the correct position (Fig. 3). The same reference template, with holes aligned with the implant sites, was employed during the surgical procedure to visualize the tooth set-up and ensure correct implant placement (Fig. 4).

Surgical procedure
The relevant teeth were then extracted and, after having carefully checked the integrity of the sites, a flapless approach for implant placement was chosen.
With the use of the resin reference template, the first drilling was precisely performed (Fig. 5). The second drilling (Fig. 6) was then accurately checked for correct placement according to planned position (Fig. 7). Since both fixtures exceeded the torque value of 35 Ncm, it was possible to put the immediate restoration into place.

Titanium temporary abutments, matched to the NNC implants, were adapted to the clinical situation by shortening them (Fig. 8) and the temporary bridge was placed in the planned position by using the resin guide once again. After having protected the soft tissue with a dental dam, the bridge was relined around the temporary abutments (Fig. 9). Once removed from the mouth, the bridge was then screwed onto NNC analogs (Fig. 10), the empty spaces were filled, any excess resin was removed and the temporary restoration was finally polished in order to reproduce the correct emergence profile (Fig. 11).

At the end of the surgical session, the temporary bridge had a satisfactory appearance with a precise fit on both NNC implants (Fig. 12). The temporary bridge was then screwed at 15 Ncm.

**Prosthetic procedure**

After 10 weeks of healing, the X-ray showed good bone integration (Fig. 13). The bridge was subsequently removed.
and the soft tissues around the implants were seen to be healthy (Fig. 14).

Therefore, the next step of making the final impression using NNC-specific transfer copings, was carried out (Fig. 15). By screwing the coping on the implants (Fig. 16), the impression was taken using a customized open tray (Fig. 17).

Then, for the final bridge, a screw-retained modality was selected in order to obtain the maximum space for the ceramic covering since, if a cement-retained modality had been used, it would have taken up more space also having to accommodate the abutments.

A golden alloy framework was subsequently created by the dental technician and checked in the patient’s mouth to ensure satisfactory marginal precision and fit (Fig. 18).

Next, a natural appearance was approached by matching the position and shape of the bridge to that of the original lower incisors before their extraction (Figs. 19, 20).

The final step was the positioning of the bridge in the patient’s mouth resulting in an accurate and esthetically pleasing match with the surrounding teeth, as shown in the frontal view (Fig. 21). The bridge was then screwed at 35 Ncm and the holes closed up with composite filling material.
The final X-ray confirmed the precision of the implant positioning and the correct prosthetic fit (Fig. 22).

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