

Case Report

Regeneration of an extremely narrow ridge using NeoGen® Ti-Reinforced Membrane and simultaneously placed Neoss ProActive® implants

Dr. Norbert Hassfurther, Germany

Patient: 19 year old female.

Clinical situation: Two congenitally missing teeth in the premolar area of the upper jaw, resulting in a very narrow atrophic ridge, with inadequate bone width to properly house implants.

Treatment plan: Regeneration using NeoGen[®] Ti-Reinforced Membrane and simultaneously placed Neoss ProActive[®] Straight Implants.

A 19 year old female presented with two congenitally missing teeth in the premolar area of the upper jaw, resulting in a very narrow atrophic ridge, with inadequate bone width to properly house implants (Figure 1).

A full thickness flap was opened, osteotomies were prepared on the palatal aspect of the ridge, and two Neoss ProActive® Straight implants were placed. Both implant sites had fenestrations on the buccal side (Figure 2) and palatal dehiscences (Figure 3).

A Neogen® Ti-Reinforced Membrane Medium was trimmed, shaped, and fitted at the implant site. Autogenous bone chips collected during drilling of the implant osteotomies were used to fill the palatal dehiscence (Figure 4). No material was used to fill the buccal fenestration, the strength of the mesh created the space for bone regeneration. The membrane was secured with two tacks buccally (Figure 5). Flap closure was achieved, and the soft tissue healing was uneventful (Figure 6).

After 7 months, second stage surgery was performed. A mid-crestal incision with releasing incisions was used to lift a flap and expose the membrane (Figure 7). The titanium mesh kept the membrane shape stable for the entire healing period. Removal of the membrane revealed that the whole volume enclosed by the membrane had been regenerated with new bone and a new wide ridge had been created (Figure 8).





Figure 3



Figure 5



Figure 7



Figure 2



Figure 4



Figure 6



Figure 8

The report continues on next page

Neoss Ltd · Windsor House · Cornwall Road · Harrogate · HG12PW · United Kingdom · T +44 1423 817733 · F +44 1423 817744 · E info@neoss.com

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Figure 9



Figure 11



Figure 10



Figure 12

Excess bone on top of the cover screws was removed (Figure 9). PEEK healing abutments were connected to the implants and the flap was closed (Figure 10). Radiographic assessment confirmed bone regeneration around the implants (Figure 11).

After 3 months of soft tissue healing (10 months after membrane placement) the implants were temporary restored (Figure 12).

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