

# NobelReplace, Snappy Abutment, and NobelProcera Crown Zirconia in the Posterior Mandible

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A 60-year-old man presented with a 10-mm pocket on the distal aspect of his left mandibular molar. A nonsmoker, he had no positive medical history relevant to his dental treatment. Clinical examination along with radiographic evaluation confirmed that the root canal filling had failed, and the tooth had fractured (Figure 1).

The patient was given the option of having the tooth restored with a removable partial denture, a conventional three-unit fixed partial denture, or an implant. He elected for the implant treatment, to be delivered in a staged approach.

After extraction of the molar, the socket was augmented with synthetic hydroxyapatite and beta tricalcium phosphate grafting material. The graft site was allowed to heal unloaded for 2.5 months. A computed tomographic (CT) scan was then taken, revealing 14.9 mm of alveolar bone height at the site; the ridge width was 6.8 mm.

The patient had become uncertain about whether he wanted to proceed with the implant treatment, but a year later he returned, having decided to pursue the original treatment plan. Clinical evaluation confirmed that the ridge had remained stable. A restorative plan was developed with the restorative dentist,

and a surgical template was created to guide the placement of a 5-mm x 13-mm wide platform NobelReplace™ implant.

The implant was placed, and a high implant-stability quotient (ISQ) value was recorded (Figure 2). Accordingly, a decision was made to place a 3-mm-tall transmucosal healing abutment immediately, rather than submerging the implant during initial healing. Evaluation 1 week postoperatively confirmed normal healing, and when the patient returned 2 months later, the ISQ reading was unchanged. The patient was then referred to the restorative dentist to begin the restorative phase of treatment.

The restorative dentist found that at least 6 mm of inter-arch space was available above the healing abutment, a sufficient dimension to enable restoration with a Nobel Biocare Snappy™ Abutment (Figure 3). The abutment is 4 mm high, and at least 2 mm of space also is required beyond that for the crown. Removal of the healing abutment also revealed 2 mm of tissue above the implant, with a flat tissue architecture (Figure 4). This also is an ideal indication for the Snappy Abutment, allowing for easy removal of any excess cement mesiodistally and buccolingually after delivery of the definitive crown.



**Figure 1** Presurgical radiograph.



**Figure 2** After placement, the implant stability was assessed and found to be high.



**Figure 3** More than 6 mm of inter-arch space was available above the healing abutment. At least that much space is required to accommodate the Nobel Biocare Snappy Abutment, which is 4 mm high and should allow at least another 2 mm for crown height.

A 1-mm tall Snappy Abutment was seated on the implant (Figure 5), and the screw was engaged to a torque of 35 Ncm, using the Unigrip Driver and prosthetic torque wrench. A radiograph confirmed proper seating (Figure 6). The Snappy Impression Coping was snapped into place on the abutment with the arrow oriented buccally (Figure 7). Polyether impression material was then injected around the coping in a closed tray, and a pick-up impression was made (Figure 8). A temporary healing cap was snapped onto the abutment (Figure 9), and the patient was dismissed.

The impression was sent to the laboratory, which fabricated the definitive Procera™ zirconia crown (Figure 10) on an off-the-shelf abutment replica. The patient returned, the healing

cap was removed, and the crown was secured with resin-reinforced glass-ionomer cement (Figure 11).

## Conclusion

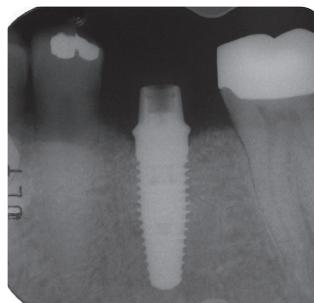
The Snappy Abutment is ideal for use in areas of flat, rather than scalloped, gingiva. Additionally, adequate interocclusal space must be present. Given these indications, use of this abutment significantly simplifies impression taking and restoration of posterior implants. The design of the retentive features of the impression coping make it easy to secure, and extremely precise impressions of the abutment and finish line can be obtained without the need for retraction cord.



**Figure 4** The healing abutment has been removed from the implant. Note the presence of 2 mm of tissue above the implant, as well as the flat tissue architecture, another indication for the Snappy Abutment.



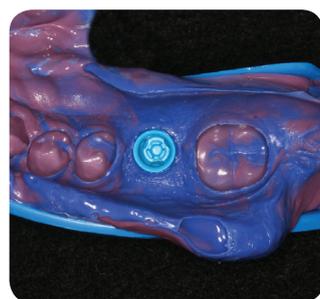
**Figure 5** The Snappy Abutment, inserted and torqued on to the implant.



**Figure 6** A radiograph confirmed that the abutment was seated properly.



**Figure 7** After securing the abutment, the Snappy Impression Coping was snapped into place. Orienting the arrow buccally ensures correct placement of the coping.



**Figure 8** The impression coping is securely embedded in the impression material, providing an extremely accurate impression of the abutment and finish line.



**Figure 9** The healing cap was snapped onto the abutment, and the patient was dismissed.



**Figure 10** Using an off-the-shelf abutment replica, the laboratory fabricated a definitive Procera zirconia crown.



**Figure 11** The definitive restoration in place.