

Partially Edentulous Reconstruction

Upper & Lower Jaw

Male Patient

Age at time of surgery: 61

Occupation: Engineer

Medical History:

Nil relevant. Reformed heavy smoker who experiences intermittent lapses. History of chronic periodontal disease.

The patient at time of presentation in November 1999 has significant bone loss relevant to upper and lower molar teeth in all four quadrants.

The upper right first molar was extracted at the first appointment with a 100% bone loss on the distobuccal root and purulent discharge (pus) from the furcation (root division).

Three months healing was allowed prior to the placement of a 5mm x 12mm regular platform Langer fixture.

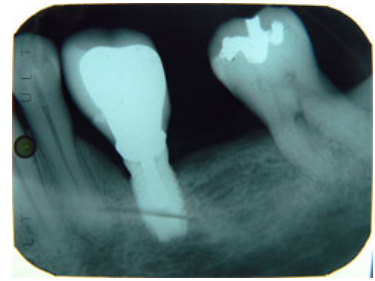
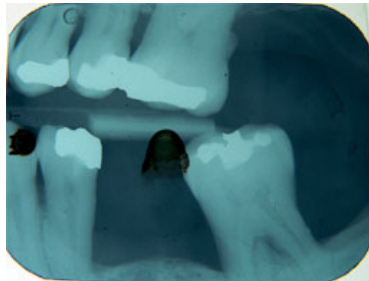
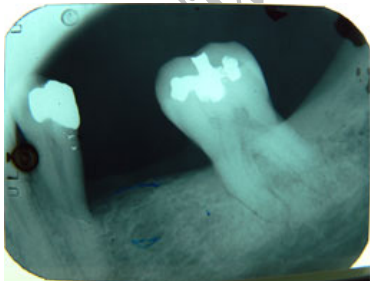
We directed the fixture along the palatal cortical plate to divert the axial plane away from the maxillary sinus and to gain length and good primary stability in quality bone. Final drill preparation was 4.3mm and the site was pre-tapped with a 5mm screw tap.

The lower left five was also extracted in December 1999 with a 5mm x 8mm Langer fixture. A routine surgical exposure of the mental nerve revealed a measured length from just below the ridge crest to the superior border of the mental foramen, of 10mm. Insertion torque was 30Ncm. Both fixtures had good primary stability.

Shortly after this procedure, in April 2000, we commenced a sequence of quadrant periodontal curettage and root planting in a routing clinical attempt to stabilise the progression of his periodontal condition.

The lower left five was extracted because it had a great II mobility, and if we waited till the tooth was absolutely hopeless, i.e. further bone loss, there would have been insufficient bone above the mental nerve to accommodate a fixture.

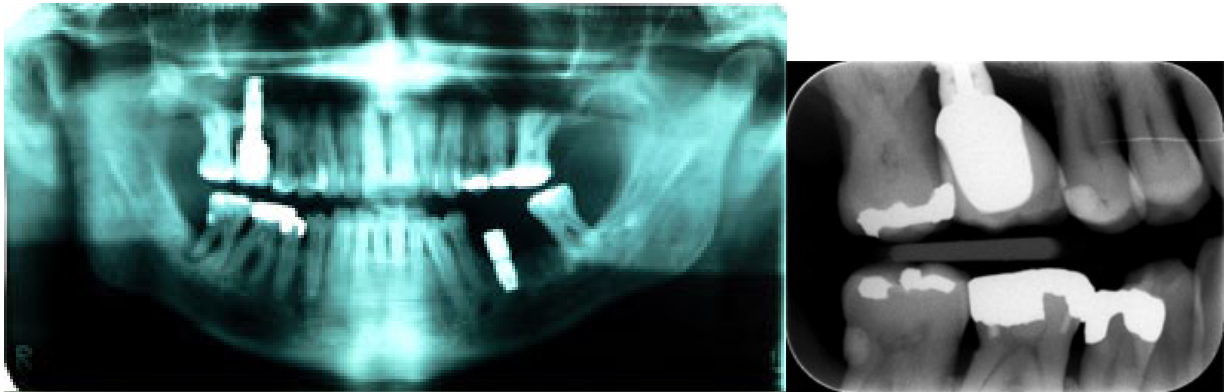
The lower left five was restored using a Ceradapt abutment and screw down Procera ceramic crown. We chose a screw down crown in anticipation of the ultimate loss of the lower left second molar. When this tooth was lost, future could be used to replace the already missing lower left six and the then lost lower left seven. Access to the screw hole of the lower left five would allow us to remove that single crown so as to incorporate the pre-existing fixture in a future bridge connection.



The upper right first molar was restored six months after placement using a 3mm Ceraone abutment and VMK crown cemented with Zinc Phosphate.

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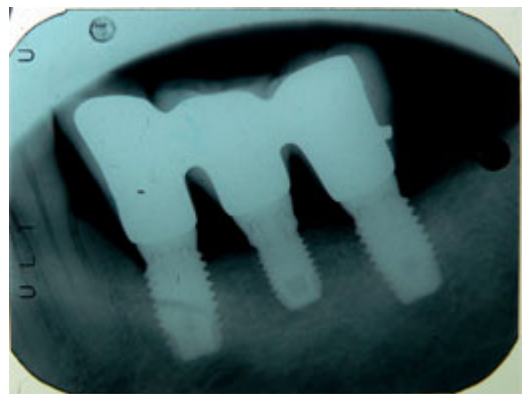
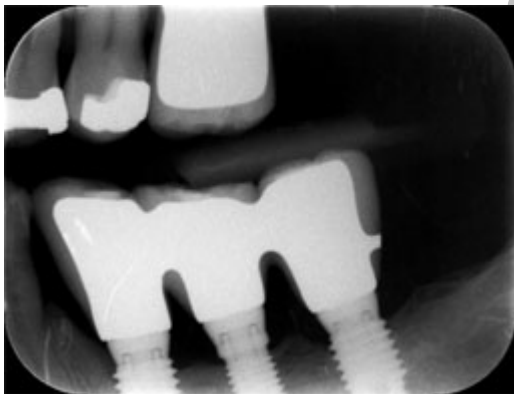
The patient is now settled into three or four month visits for periodontal quadrant cleaning.

In October 2002, the lower left seven developed symptoms related to a periodontic endodontic infection and was extracted.

In November 2002, a 4mm x 7mm regular platform standard fixture was placed in the position of the lower left first molar and a 5mm x 8mm standard regular platform fixture, with graft augmentation around the cervical collar, was placed in the position of the lower left seven.

Both fixtures were inserted with 40Ncm insertion torque.

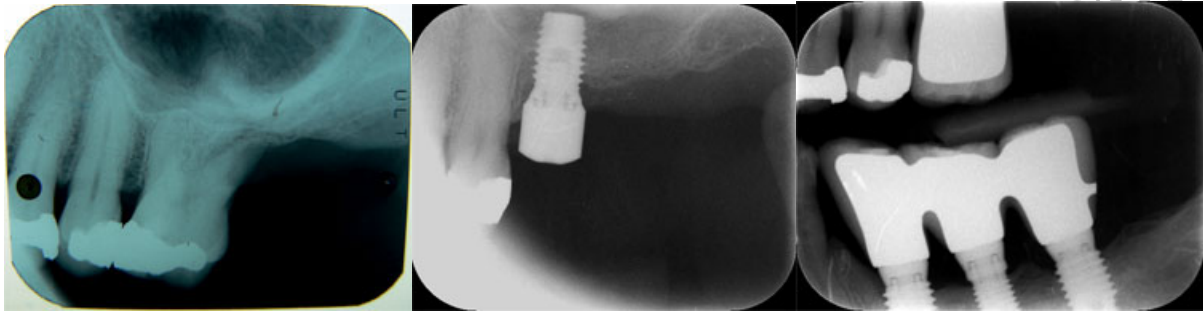
In March 2003, the crown on the lower left five was removed and three 2mm multi-unit abutments were placed on the fixtures in the left posterior mandible ultimately supporting a screw down VMK bridge.



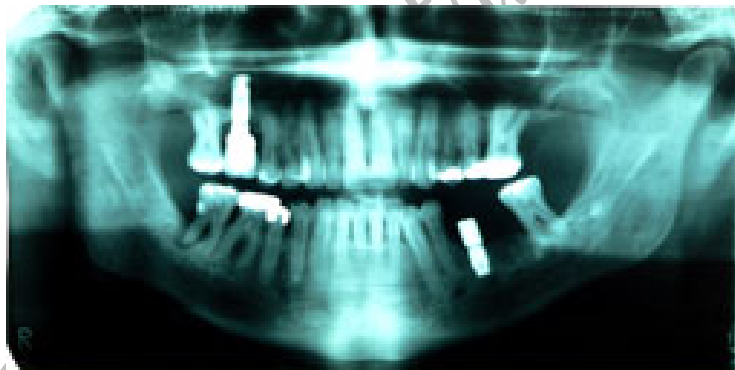
In November 2003, the upper left first molar had become terminal, being able to probe to the root apex. The tooth was extracted in January 2004 and a 5mm x 8.5mm wide-platform MKIV Ti-Unite fixture was placed in April 2004. Once again, we made use of a palatally inclined preparation. The maxillary sinus had herniated into the site, more significantly than the fixture placed four and a half years earlier, replacing the upper right first molar. We created primary stability by preparing a ledge in the palatal cortex with a tapered preparation and incomplete counter-sink as we had a patent sinus perforation on the buccal aspect.

The fixture was machine locked on 20Ncm and then on 30Ncm. We then manually stopped on 40Ncm, with the fixture placed slightly above the counter-sink, out of concern that there might be insufficient bone to prevent the fixture migrating into the sinus without definitive support from the crestal cortical bone.

The upper left first molar was restored in December 2004, with a wide-platform custom Procera titanium abutment and cemented VMK crown.



The patient had not been totally consistent in his presentation for routine periodontal maintenance, and has been procrastinating on the removal of his lower right second molar.



Treatment Outcome:

Patient has now had five Brånemark system implants to replace hopeless posterior teeth and despite his history of periodontal disease, which is often linked to higher failure rates, all have been primarily successful over the first five years.

The right side second molar teeth, upper and lower may be candidates for fixture placement in the future. The case as a whole, demonstrates the capacity to support a failing posterior dentition with progressive fixture placements while continuing to treat and maintain the rest of the dentition with a good medium to long term prognosis.

Fees:

Fee for the most recent fixture was \$4,500.00.

Fee for the two additional fixtures in the left posterior mandible and the restoration was \$8,000.00.

The earlier fixtures of the year 2000 were each charged at \$3,500.00 with restorations.