Adverse Sequelae in a Series of 86 Cases of Immediate Molar Implant Replacements

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Introduction
Surgically intensive procedures can be difficult for the patient to tolerate and to recover from. In 86 consecutive patients who received immediate implant placements following the extraction of maxillary or mandibular molars, we wanted to know if their post-therapy healing was eventful and if there were any particular adverse sequelae.

Criteria for inclusion
All patients in the Immediate Molar Implant Replacement series were included in the evaluation and follow-up.

Procedure
The patient records from initial evaluation through to patient discharge were reviewed. Patients with particular problems of discomfort or in healing were identified and assessments of the significance of the issues were then ranked.

All patients were telephoned the evening of their procedure to assess their level of post-operative pain, swelling, paresthesia and control of bleeding in the operation site.

Unless there were particular issues, the patients were then seen two or three weeks following the procedure for suture removal, wound debridement and instructions on oral care and pain management during the healing period.

If a particular issue was identified then recommendations concerning management of that issue was discussed with the patient and care and medications were prescribed as necessary.

The end of active therapy was regarded as the time when the implant was stable and healed sufficiently for restorative therapy to be instituted. This was provided either in our facility, or for referred patients with their own restorative dentist.

Where possible a post-restoration radiograph was taken at the time of restoration insertion or shortly following. Later evaluations will be conducted on a yearly basis.

Discussion
Implant survival was excellent. Only one implant in the series was lost due to lack of initial stability.

Adverse sequelae were restricted to very few cases. In general, four types of problems were identified: post-operative pain, swelling, paresthesia and control of bleeding in the operation site.

Hematoma formation
This was found in only one case.

There had been a Buccal Wall defect at the time of extraction.

This had been repaired with a sub-periosteal membrane down the buccal wall with augmentation.

Sequestrum Formation

Three cases had sequestrum formation, two on the mandibular labial and one on the maxillary palatal. These probably came about as a result of the extraction and could not be attributed to the implant procedure.

This was the most severe case, and it healed with a lower labial margin. The patient was unconcerned.

Loss of Alveolus
All cases had some shrinkage of the alveolar complex, but this was notably less than found in a traditional two-stage protocol (Extraction, healing for three months, implant placement).

This can largely be attributed to this being a “Closed” rather than an “Open” wound procedure. Also to the use of a slow resorbing bone graft material (Bio-Oss Collagen®) as the regeneration material used about the implant.

3. Loss of alveolar height was assessed at the time of implant impression by comparing the gingival margin height about the implant to that seen on the adjacent teeth. Generally the loss of height was in the range of 1-3mm. Patients were not concerned about this issue.

This was considerably less than is seen about implants placed in a conventional 2- or 3-stage protocol.

Conclusions
1. Immediate molar replacement can have a high rate of success.

2. The surgical protocol is not as complex as most doctors imagine.

3. It saves multiple surgical interventions, speeds therapy and reduces costs considerably.

4. Patient and referring dentist appreciation of the therapy is very positive.