



Fig. 1: Radiograph showing a severely decayed tooth that is unsalvageable
Fig. 2: Depth guide in place showing the position of the initial drill in the furcation bone
Fig. 3: Ideal implant placement in the furcation: 1 mm below the level of the furcation bone
Fig. 4: Implant in place in the furcation bone
Fig. 5: Follow up after 24 months: notice the excellent emergence profile of the final crown
Fig. 6: Follow up after 24 months: occlusal view

Cases that had subgingival healing were exposed after four months and allowed to heal for two months before the final restoration was placed. These implants were then bone trained in order to improve the bone-to-implant contact before final restoration.

Results

In total, 100 molar implants were placed, of which 64 were mandibular and 36 maxillary. The implants have been followed up for a period of 1-24 months. There were no soft tissue complications and no implants were lost during this time. The treatment was often finished after two months and only the few cases that did not have adequate primary stability required longer treatment. Only two implants required soft tissue coverage. A few cases required slightly larger diameter implants, as the furcation bone was either non-existent (conical shaped roots) or too thin for primary stability. No sites were aborted due to poor bone or poor stability. Soft tissue healing was almost complete within seven days and all implants displayed healthy soft tissue at the time of integration assessment.

Discussion

Immediate molar implant placement has been well documented and

has had great success. However, much of the literature advocates the use of either wide diameter implants in order to achieve primary stability from the buccal and palatal bone or implants that are longer than the roots in order to utilise the bone apical to the roots.

Although they boast excellent results, some studies fail to mention that the implants in a number of cases had to be aborted due to insufficient primary stability. A negative factor of wide diameter implants is that there is a high risk of buccal bone loss, which is more marked in the molar area than in premolar sites. With this in mind, there is potentially a high risk of buccal recession and a resulting exposure of the buccal threads. Implants placed in the palatal root of the maxilla have a much lower success rate (82 %) over 5 years. This may be due to the “off-axis-placement” of the implant and the cantilever effect produced by the crown. Narrow diameter implants do not have the same risk as wider diameter implants, because there is little risk of bone remodeling up to the middle of the furcation – the ideal position for the implant. The furcation also offers far better stability for the narrow diameter implant without requiring usage of apical, buccal or palatal bone. The final drill for the A-implant does not damage the furcation bone (Fig. 2 and 3). However, the larger the drill size, the greater the amount of damage