ing soft tissue structure was decisive in most cases.

Case report

A 56-year-old female patient was referred with a history of a persisting deciduous upper canine and suffering from periodontitis and apical root resorption. Subsequently to radiological evaluation, probing revealed only a minimal circumferential pocket depth of 5 mm and no exudation of pus. Vitality of the tooth on testing was negative and the tooth was slightly movable. An abnormal lateral position with a slight movability had also been recognised.

A decision was made for an immediate implant protocol assuming bone structure to be unaffected. Under local anaesthetics the tooth was extracted atraumatically, buccal and palatal plate were intact with sufficient bone thickness (Fig. 2). Subsequently, the extraction socket with a little amount of apical inflammatory tissue had been curetted followed by irrigation using 5 per cent hydroperoxide. Next, a Camlog Screw-line (Promod plus surface) implant (CAMLOG Biotechnologies AG, Basel, Switzerland) was placed using a 10° palatal angulation during insertion, thus providing enough primary stability. Implant diameter was 5 mm, length was 16 mm throughout (Figs. 3, 7).

However, the implant socket gap was closed using bone material that was collected with an Astra Tech Bone Trap bone collector. A provisional crown (plastic-coated, highly polished, composite) with screw retention was fabricated and integrated on the same day (Figs. 5, 6). During the fabrication period a healing abutment was attached for three to four hours to maintain stable mucosal condition and prevent mucosal collapse (Fig. 4). When integrated, contacts of the crown were carefully removed during maximal intercuspation, protrusion and lateral shift. A strict weekly recall of the patient followed, instructions were given to ensure perfect oral hygiene and a
stringent protocol was set up to avoid bite contacts and chewing with contact to the provisional crown.

X-rays were taken directly after surgery and prior to definitive restoration (Fig. 7) and stability of the implant-crown system was checked clinically throughout the healing time. Three months later the provisional crown was removed. At this time the surrounding soft tissue structures appeared to be within normal limits and unaffected (Fig. 8). Impressions were taken to fabricate a definitive crown (Fig. 9). By the time of definitive management, the mucogingival junction was on the same level as the area around the natural contralateral tooth. Papilla contour and surrounding tissue structure were preserved as predicted before (Figs. 10–12). During follow up (six months and 12 months) no signs of inflammatory lesion, loss of stability or soft tissue attachment were noted and the papillae remained stable.

Discussion

Various options are available for functional and aesthetic restoration of anterior teeth. Their choice is dictated by factors like severity of infection of the teeth to be extracted, the pocket depth and related bone defects. Immediate single-stage implant placement proved to be the least traumatic option, which best preserved both the soft tissue and post extraction socket.

A different use of surgical and prosthodontic techniques is indispensable to account for conditions in the individual case. Given an adequate amount of hard tissue, soft tissue contours can be expected to return to normal as presented in this case report.

It was demonstrated that implants inserted immediately into fresh extraction sockets will heal predictably with clinically significant quantities of bone and preserving the surrounding soft tissue structures. Detective alveolar bone structures, especially a defective vestibular wall, that become visible during extraction, require additional measures that will have to be discussed soon.
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