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case report

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The anterior maxillary implant and a high laugh line: Often a great challenge

author_Bert Eger (DMD), Germany

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Placing an implant in the anterior sector of the maxilla with clear indication poses a great challenge in most situations, especially when the patient shows a high laugh line and the treatment has been delayed. Today, however, osseointegration is no longer the only criterion when assessing the outcome of an implant treatment: The aesthetic result has become just as important. In the following, a passionate mountaineer explains two completely different initial situations after the loss of the upper left lateral incisor, and its replacement.

Teufelsberg Mountain, 120 m, Berlin, uncomplicated

Especially when critically evaluated, there are not many clear indications for an immediate load implant in the anterior sector of the maxilla. Furthermore, one must differentiate between immediate treatment and immediate load. A possible bone loss and the surrounding soft tissues should be analyzed presurgically.

Our 37-year-old Prophylaxis Assistant had previously had an apicoectomy of the upper left lateral incisor. This apicoectomy was implemented up to

the level of the cast crown. Afterwards, the tooth was clinically without symptom. However, after about 15 years it became increasingly loose and finally reached a looseness of level 3, while being free of irritation periapically. This was most likely caused by the extreme ectomy. (Fig. 1)

Despite the low apical brightening we extracted the upper left lateral incisor, protecting the patient with antibiotics (Penicillin 1.5 Mega), and immediately inserted a NOBEL PERFECT implant 5.0 x 13 mm. The previous crown was separated from the extracted tooth and set upon a temporary titanium abutment to be used for about 6 weeks. (Fig. 2) In order to guarantee an immediate treatment, but not an immediate load, the crown was not only screwed upon the implant, but the loads were distributed onto the neighboring teeth with help of DUALZEMENT. Furthermore, we deliberately let the temporary crown end above the gingiva line for the first 6 weeks in order to avoid irritations of the gingiva during the highly sensitive healing phase. (Fig. 3)

After six weeks, the radiograph showed a healing process without complication. (Fig. 4) This was also affirmed by the pinkish shade of the gingiva encountered when removing the temporary abutment. (Fig. 5) 7 weeks after the permanent abutment was affixed, the final photograph (Fig. 6) shows an excellent result.

However, the treatment was comparatively un-



Fig. 1

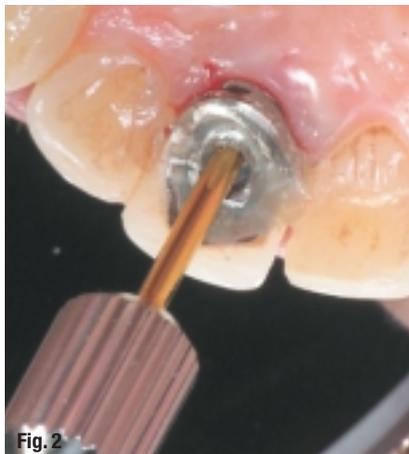


Fig. 2

complicated, just as the ascent of the Teufelsberg in Berlin...

_K2, 8,611 m, Pakistan, most challenging peak in the world

When planning implantations in the anterior region of the maxilla, the surgeon should previously analyze the bone topography as well as the surrounding soft tissue. In the case of a 38-year-old woman described in the following, the upper left lateral incisor had been extracted. (Fig. 7) The laugh line is high and the radiograph showed a buried root, which caused the formation of a fistula. (Fig. 8) Even without a CT, the experienced implantologist can vaguely discern a significant facial retraction with loss of the labial substantia compacta. (Fig. 9) All augmentations were to be carried out in a sterile environment. We removed the buried root under local anesthesia. Six weeks later,

while protecting the patient with antibiotics, we opened a gingiva flap, proving the assumption that the facial osteon was almost completely gone. (Fig. 10) When finding an alveolar ridge with a thickness of 1-4 mm, it is the prevailing opinion that neither an augmentation with particulate augmentation material alone, nor an alveolar bougenage with os-



Fig. 6



Fig. 3

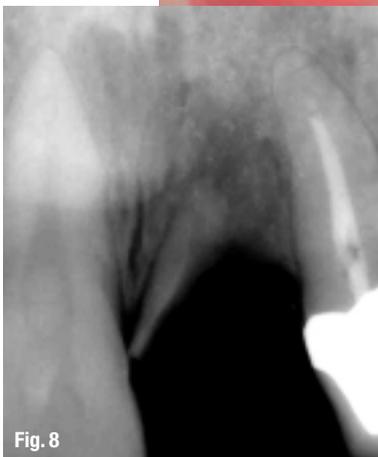


Fig. 8



Fig. 4



Fig. 9



Fig. 5



Fig. 10



Fig. 7



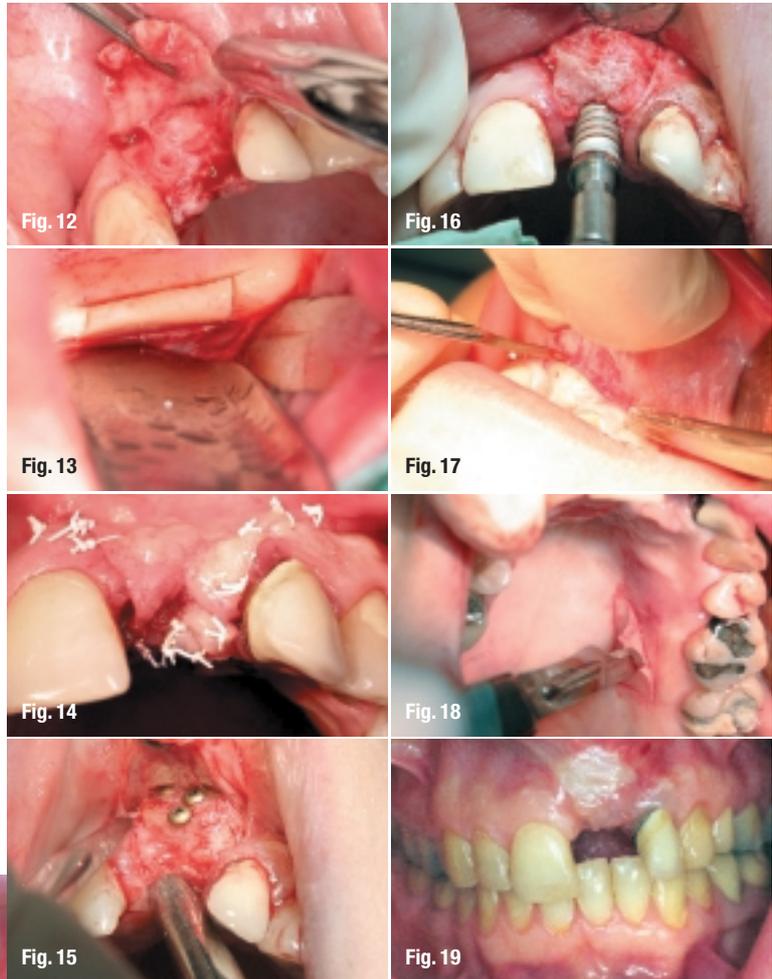
Fig. 11

teotomes nor a distraction osteogenesis (single implant!) are possible. After thorough consultation on different bone augmentation materials, the patient decided on using CERASORB (synthetically manufactured tricalcium phosphate). The labial cavity was filled with this bone augmentation material, the material was protected by a membran (GORE OSSEQUEST, absorbable, barrier function for 6 months) and fixed with absorbable pins (Bio Tack). (Fig. 11)

After four months we reopened the flap (membrane and pins were not yet completely absorbed) (Fig. 12) and freed the surgical field of any granulations. Thus having provided a spacious basis for the osseointegration of the bone block to be transplanted, we removed it from the right side of the patient's

mandible (Fig. 13), fixing it at the site with 3 OSSEOFIX bone screws. Cortical transplants from the mandible show an easily controllable multiplication of the bone volume, while guaranteeing a quick healing and a very dense bone structure. To provide for sufficient flap material, the mucogingival flap was mobilized (slitted) and fixed with a mattress suture as well as with single button sutures. (Fig. 14) This suturing technique creates a high healing certainty, however, the vestibulum becomes flatter as a result.

After another 18 weeks, the flap was opened once again. The clinical check up after re-



this case means that the highly complex reconstruction of the alveolar process as well as of the mucogingival areas seems to be generally successful. The middle papilla could be a bit longer, however, after discussing it with the patient we set aside any further surgical measures. (Fig. 20)

The author will provide a literature list upon request.

moving the periost residue showed a well healed-in bone block and a significantly increased bone volume. (Fig. 15). The 3 bone screws were removed and a conical screw implant of company Schütz Dental (IMPLA; 5.3 x 13 mm) was inserted mechanically. (Fig. 16)

The oral vestibule became very flat after numerous surgeries in the area of the upper left lateral incisor, making a vestibular build up necessary. (Fig. 17) A free mucosa transplant was removed from the left side of the palate. (Fig. 18) The color difference between transplant and gingiva does not matter, as the transplant sits slightly above the laugh line. (Fig. 19)

„Figuratively speaking, K2 was scaled“, which in

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<p>Dr Bert Eger</p> <p>Dental specialist implantology – DGZI Wrangelstraße 11-12 12165 Berlin, Germany Phone: +49-0 30-7 92 83 84 Fax: +49-0 30-79 70 17 27 E-mail: Dr.BE@t-online.de Web: www.bert-eger.de</p>	