

# Atypical Implant-Orthodontic Treatment. Case Report.

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## Case

The patient with the extracted left central upper incisor because of unsuccessful endodontic treatment of the confuse dens of the central incisor in the jaw visited our surgery in May 2008 (picture 1, 2, 3, 4). The long-term use of the settling removable denture (8 years) resulted in the loss of the alveolar's bone in the place of the lost tooth 21 (picture 2, 3). Because of the lack of the alveolar's bone and the necessity of orthodontic treatment (picture 3, 5), the atypical procedure with regard to the treatment sequence was decided on. In the first stage the Camlog® implant was inserted in the place of the lost tooth and simultaneously bone augmentation was made (picture 5-10). Orthodontic treatment started after osseointegration of the dental implant (picture 15-20). The initial space of the lost tooth 21 was enough to install the implant in the front area (picture 5). But the thickness of the alveolar ridge was a problem in the labial/palatal diameter (picture 8, 9). After the implantation connected with bone augmentation and very good secondary stability (Osstell 78-80), the presence of the stable implant in the neighbouring tooth intended for orthodontic treatment was used. Intraoral implants after osseointegration within alveolar bone are extremely stable. In the described case, strong support of the NiTi wire on the implant 21 gave pure, one direction force which moved the lateral incisor 22 distally. The effect of the vertical and distal position of the tooth 22 was received after 4 months. The stable maintenance of the root of the tooth 22 in the alveolar bone, by using stainless wire, brought bone about and gave the chance to remodel it in space between the root and the implant (picture 17-20). Furthermore, because of aesthetic and psychological reasons, implantological treatment was applied in the first stage and orthodontic one later. The temporary crown on the implant instead of the removable denture created the comfortable conditions of social life for the young man. Planned remodelling of soft tissues around the implant neck and preparing the final ceramic crown were made after opening the implant and in the retentive orthodontic phase (picture 11-23).



## Summary

The complex planning and checking the results in the individual stages of treatment gave the satisfying final result (picture 21-23).

The three-year observations confirm the stability of the positive final result treatment received in the interdisciplinary treatment both on the level of planning and the realization of the procedures as well as the further cooperation with the patient (picture 24).

Thanks to the excellent cooperation between the dental surgeon and the orthodontist, the very good aesthetic and functional effect was obtained.

