

# Complex Combined Treatment Of An Elderly Patient With Camlog Implants - A Case Report -

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**Introduction:** Complex interdisciplinary combined treatments are nowadays a required therapy option for re-establishing a functional oromaxillofacial system, even for elderly patients. Those treatments might include, beyond surgical or prosthodontic implant procedures, also orthodontic tooth movements. Definite or temporary inserted implants can be used for orthodontic tooth movements as skeletal anchorage to maintain maximum fixation or to replace missing teeth, especially in cases with multiple aplasia of teeth.

**Case report:** A 76 year-old female patient underwent a complex combined treatment at the Medical Centre of the Johannes Gutenberg-University Mainz. She was diagnosed with a reduced number of teeth in the lower left mandible (missing teeth 33 – 38) and an age-related periodontal condition. There was a severe anterior crowding in the mandible with a cross bite of 12 / 43 due to the buccal position of 43 and a complete space closure between 42 and 44. Tooth 42 displayed a root canal treatment with an extensive composite filling (Fig.1).



Figure 1: Pre-treatment x-ray.

After considering the treatment options and evaluating the treatment desire, the following treatment goals, requiring several specialties, were determined: establish the ability for satisfactory mastication on the left side, prevent further periodontal damage, and improve the ability for oral hygiene and quality of life.

**The therapy included:** 1. periodontal treatment (Deep Scaling); 2. insertion of Camlog Implants (Camlog Implant Screw Line Promod Plus, in region 33 and 34 4.3 x 13 mm implants, region 36 and 37 4.3 x 9 mm); 3. definite implant restorations after a healing period of six months; 4. extraction of 42; and 5. partial orthodontic treatment, carried out with a fixed appliance in the lower dentition, using the Camlog Implants for skeletal anchorage to prevent side effects (Fig. 2).



Figure 2: Situation after implant insertion and definite restoration, region 33 – 37: (a) x-ray, (b) and (c) intraoral photo; (d) beginning of orthodontic treatment.

After 10 months, the orthodontic treatment was successfully accomplished. The tooth 43 was aligned into the dental arch, the anterior crowding and cross bite was resolved. The appliance was removed, a fixed bonded retainer applied and the whole dentition stabilized by a transparent splint for nocturnal wearing. The implant and periodontal situation remained stable and asymptomatic. The patient is currently enrolled in a recall schedule.



Figure 3: Post-treatment situation: (a) x-ray, (b), (c) and (d) intraoral photo.

**Discussion:** After deciding to treat the left mandible with several implant insertions and taking into consideration the age and request of the patient, the following treatment options were discussed, reflecting orthodontic therapy: 1. Aligning 43 orthodontically after extraction of 42.

2. Extraction of 43.

3. Extraction of 42 and 43 and insertion of an implant in region 43.

**Conclusions:** Approaching elderly patients by using complex combined treatments to maintain a higher quality of life by re-establishing the oromaxillofacial system is nowadays possible and more often demanded. Preventive aspects and improvement of aesthetics are clear benefits of these combined treatment approaches. In the complex therapy of severe anomalies are implant treatments able to support orthodontic tooth movements (skeletal anchorage) but also vice versa. Accordingly, orthodontic therapy has to be included in the planning of an implant treatment, even in elderly patients.