39. THE USE OF THE SURGICAL GUIDES FOR IMPLANT-PROSTHETIC REHABILITATION IN THE AESTHETIC AREA

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Introduction. Placing a dental implant to replace a central maxillary incisor can be a challenge in many ways. Many factors need to be considered in order to generate an optimal treatment plan. An important aspect is the degree of soft and hard tissue atrophy that often requires augmentation and bone grafting procedures. At the same time, correct implant positioning represents one of the main challenges from biomechanical and esthetical points of view. In this context, the anterior zone could be crucial for early rehabilitation of the patient due to the particularities of teeth positioning.

Case presentation. The case study focused on a 32-year-old patient who was clinically and para-clinical (CBCT) examined, at which was established the D3 (by Misch) bone density, for the following planning of implant-prosthetic treatment. Previously, the bone addition procedure was performed. In order to achieve a good result, the examination was performed with the prosthodontist. Following the conventional impression and the virtual planning of the cast model, the stereolithographic model was obtained (scanned in the laboratory) and superimposed on the CBCT, after which the surgical template for partial drilling was made (using 3D printer ASIGA Pro 3D). The surgery was performed using partial drilling through the surgical guide followed by osseous densification in free hand mode (Versah Drills system) and installation of the implant followed by immediate screw retained restoration.

Discussion. A single missing central incisor is often the most difficult surgical and prosthetic challenge due the ambition to obtain good aesthetics, but also the difficulties for the surgeon to make the ideal direction of osteotomy. In the research it was proposed to place the implant in axial position, which allows the use of a screw retained restoration (hiding the fixation screw channel in palatal side) as well as to obtain an axial loading. An important role is also played by the accuracy of the guide and checking of its fitting with the teeth. The postoperative result evaluated on the CBCT as well as in the oral cavity showed the implant in the desired position, according to the preoperative plan.

Conclusion. Guided surgery allows us to obtain predictable results related to implant position. The use of this technology requires additional experience due to the risks that occur both in the planning stage and in the positioning of the guides in the oral cavity.