

68. THE USE OF TRANSSINUS AND PTERYGOID IMPLANTS ON THE UPPER JAW AS AN ALTERNATIVE TO THE CLASSIC ALL-ON-4/6 PROTOCOL



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Introduction. The problem of the "all on 4/6" operation on the upper jaw arises in complex clinical situations, such as the inability to achieve primary implant stability due to maxillary sinus pneumatization, significant atrophy of the alveolar process, and decreased bone density. The use of an alternative method by using nasal, transsinus, and pterygoid implants of considerable length (18-25 mm) allows to carry out the operation without the need for bone grafting (sinus lifting) and the use of more invasive zygomatic implants.

Case statement. A 65-year-old patient has turned to a dentist for total rehabilitation. CT showed a complete secondary adentia on the upper jaw, marked atrophy of the alveolar process in both horizontal and vertical planes (Cawood and Howell). Bone density was at level 3-4 (Lekholm and Zarb) with significant maxillary sinus pneumatization. It was decided to use a modified protocol for total rehabilitation with the application of transsinus and pterygoid implants. Transsinus implants were placed in the region of the 5th teeth, while the implant apex was fixed in the frontonasal buttress. Pterygoid implants were placed in the pterygoid process of the sphenoid bone in the region of the 7th teeth and also achieved high primary stability. Inclined implants of 18-25 mm in length, passing through the maxillary sinus into the pterygoid process, provided high primary stability more than 70 Ncm. Anterior implants, placed in the lateral incisor region, achieved stability of approximately 25 Ncm. Immediately after the surgery, an impression was taken, and a temporary acrylic prosthesis was fabricated on a metal framework.

Discussions. Patient's rehabilitation proceeded as planned with predictable satisfactory results, despite the difficulties. The high primary stability of inclined transsinus and pterygoid implants allows their use in cases where the traditional "all on 4/6" procedure is not feasible. This method helped to avoid bone grafting and significantly reduced patient treatment time, being cost-effective, which is quite important. The total torque obtained with inclined implants and two direct implants in the anterior part of the upper jaw allows the safe loading of these implants in a short time and the fabrication of complete dental prostheses with 14 teeth.

Conclusion. The implantological treatment of this patient using long implants demonstrated good results and allowed rehabilitation in a case where the use of the traditional protocol is not possible. Despite the advantages of this method, there are several serious complications that may pose risks to this upper jaw restoration approach.