Rehabilitation of an atrophic posterior mandible with 4-mm short implants: a 3-year post-loading case report

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Aim: We describe a successful implant-prosthetic rehabilitation of an atrophic posterior mandible with 4-mm long implants.

Materials and Methods: A 62-year-old systemically healthy male was referred for fixed prosthetic rehabilitation of the right posterior mandible. Clinical and radiographic assessments showed an important posterior mandibular atrophy. Computed Tomography (CT) scans revealed 5 mm mean residual bone height above the mandibular canal. The patient refused to undergo any reconstructive surgeries, but he wanted a fixed rehabilitation, so the authors proposed placing 4-mm short transmucosal implants (TwinKon Universal SA2, Global D, Lyon, France). After local anesthesia a full-thickness crestal incision was made and 4 implants (4 mm in length and 4 mm in diameter) were placed in the mandibular right second premolar and first, second and third molar sites.

Results: The post-operative course was uneventful. Four months after implant placement, a temporary prosthesis was put in place, which was then replaced by a definitive prosthesis after another four months. The follow-up time is at three years after implants loading.

Conclusions: With the limits of this case report the use of such short implants can allow a fixed prosthetic solution without the need for vertically augmenting of the mandibular bone. This procedure considerably reduces intra and postoperative patient discomfort compared to reconstructive surgery for placing longer standard implants.