

For a perfect fit—CAD/CAM bar restoration on XiVE implants

Authors_ Björn Roland & Dr Peter Gehrke, Germany

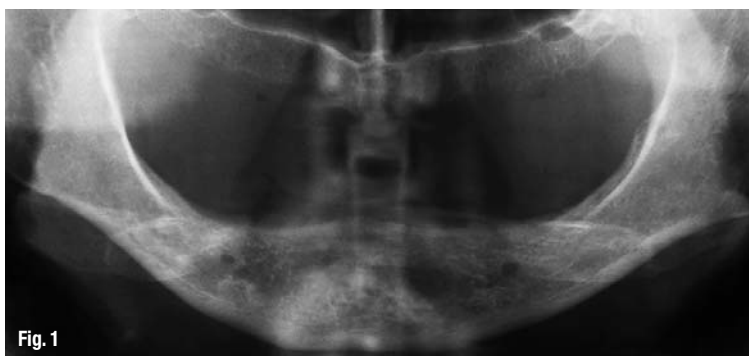


Fig. 1



Fig. 2

Fig. 1 _The panorama image shows the situation prior to insertion of the XiVES implants.

Fig. 2 _Two weeks after being uncovered, an open pick-up impression is made at implant level with an individual tray.

_Conventional or CAD/CAM? Today, dental technicians and implantologists ponder this question more frequently than ever. More and more often, they tend towards CAD/CAM. Owing to their tension-free fit, CAD/CAM-fabricated solutions are particularly well suited for the restoration of larger jaw sections. Deciding in favour of or against a CAD/CAM restoration should thus always be a team decision. With his expertise and training, the dental technician is able to contribute considerably to an aesthetic and technically perfect result.

To ensure successful prosthetic restorations, all the steps of a procedure—from planning through impression to insertion—need to be performed with utmost care. This is equally true for both conventionally cast work and CAD/CAM-fabricated structures. With both methods, only a precise transfer of the oral situation to the model guarantees success. Precision is vital for both methods, particularly when restoring larger jaw sections. Outstanding results can also be obtained with conventional casting technology if the work is done accurately and

with sufficient experience. However, the risk of an ill fit is substantially higher compared with modern CAD/CAM procedures. Furthermore, wide-spanning and solid frameworks in particular enable cavities to arise and the framework to warp. Also, (partial) overheating of the melt, another potential quality flaw, is often observed with large volumes. These problems do not occur with CAD/CAM technology.

_Therapy decision

Our patient wished to regain a firm bite and unimpaired speech. She had already been wearing mucosa-supported complete dentures for 20 years, but was comfortable only with the maxillary denture. The grip of the mandibular prosthesis was inadequate owing to the resorbed alveolar ridge (Fig. 1) and obstructed eating and speaking. There were no general medical findings ruling out an implantation. After detailed consultation, we opted for a bar denture on four implants placed inter-foramally in the mandible. A fixed restoration was not possible owing to cost considerations. A prosthesis

Fig. 3 _In order to check the accuracy of transfer, a bar made from autopolymerisable is manufactured on a screwed-in Friadent MP abutment and split into segments.

Fig. 4 _The individual tray for the pick-up impression with fixed pick-up screws.

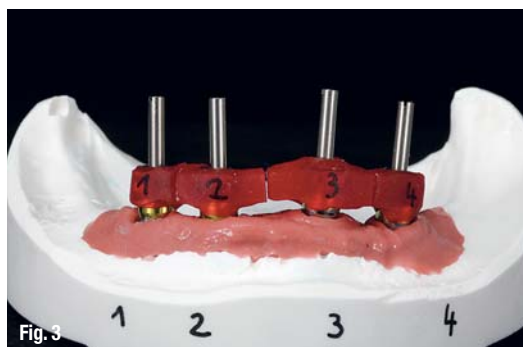


Fig. 3



Fig. 4