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Immediate Loading Protocol In Full-arch Restoration Utilizing Full Denture Converted Into Screw-retained Restoration In Maxilla.

Dental implants after the surgery phase are conventionally kept without loading during the healing period to minimize the risk of implant failure. During healing period removable dentures are used, but many patients find these temporary prostheses rather uncomfortable and it would be beneficial if the healing period could be shortened without compromising implant success. Immediate loading with full-arch, interim, all-acrylic resin prostheses eliminates the need to undergo a second surgical procedure, reduces the number of post-surgical visits for prosthetic maintenance, increases overall comfort, provides immediate restoration of dental function and offers immediately improved aesthetics.

The aim of this poster is to describe the protocol to convert full denture into screw-retained restoration immediate after surgical phase to successfully load dental implants immediately after their placement.

The Patient with hopeless, periodontal involved teeth was referred for complete implant-supported rehabilitation of the maxilla (Fig. 1). Before extraction immediate removable full upper denture was prepared (Fig. 2). Under the local anaesthesia eight 4 mm diameter and 10 mm length implants were inserted and conical uni-abutments were screwed with torque 20 Ncm (Fig. 3). Titanium temporary cylinders were placed on the abutments and secured using the retaining screws, tightened by hand (Fig. 4). Holes were drilled into the provisional denture at the abutment locations to passively fit around temporary cylinders (Fig. 5) and the rubber dam were then positioned into the grooves at the base of cylinders to isolate the surgical field (Fig. 6). The upper denture were repositioned and luted to the temporary cylinders with acrylic resins (Fig. 7). The acrylic resin is allowed to set per the manufacturer's instructions. The denture were removed (cylinders were luted into place) and acrylic was added to completely fill the voids in the base of the denture (Fig. 8). The provisional denture were completely trimmed to fit (Fig. 9, 10). Final seating of provisional denture included tightening the retaining screws to 10Ncm using a torque device (Fig. 11). Occlusion were checked and protective temporary material were placed in the screw access holes and sealed (Fig. 12). After 6 months, the provisional reconstruction was removed, all fixtures were checked for stability and the final screw-retained metal-ceramic prosthetic reconstruction was made (Fig 13).

This procedure is a treatment alternative for patients with advanced periodontal disease or who are already edentulous and unable to manage complete dentures.

