

Combining bars and stud attachments for the rehabilitation with implant supported overdentures: A case report

Introduction: Implant supported overdentures have been proven to be an effective treatment option for restoring edentulous patients, with high success rates. Various attachment systems are used to anchor overdentures to the underlying implants. The purpose of this presentation is to describe the delivery of implant supported overdentures retained by stud attachments incorporated within the bar design.

Case description: A 67-year-old male patient presented to the Postgraduate Clinic of the National and Kapodistrian University of Athens seeking prosthodontic treatment. The mandible was completely edentulous and the upper anterior teeth supported a Kennedy Class 1 removable partial denture (RPD). Clinical and radiographic examination revealed inadequate support and stability of the existing prosthesis while the teeth were characterized with poor prognosis. Their extraction and implant supported prosthesis was proposed.

Three months after the extractions four implants were placed in the maxilla and two in the mandible that would later support implant retained overdentures. From the diagnostic jaw registration stage, excessive restorative space was revealed. Due to patient's desire for a stable prosthesis, a bar design was planned. Within the bar's design, incorporation of stud attachments was decided to better distribute the retentive elements and yield the advantages of the chosen attachment system. The mandible would be rehabilitated with a conventional implant supported overdenture retained by two stud attachments.

The clinical steps followed were: impression taking with open tray technique, jaw registrations, tooth set-up try-in, bar fabrication, metal framework fit check and prosthesis delivery. Recall appointments certified the improvement regarding patient's quality of life.

Discussion: Different attachment systems may offer different advantages as well as technical complications. At the time being literature does not show any system being superior to another. Under proper circumstances and after detailed treatment planning a combination of attachment systems may be chosen to combine clinical benefits.