Case Report

Mandible Implant overdenture – A case report

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ABSTRACT

Implant overdentures have ended up being one of the most incredible elective choices in prosthetic recovery of different instances of edentulism. They fulfill the patient’s expectations, work on personal satisfaction with their drawn out workableness and unsurprising results. Throughout the long term, critical progressions have occurred in the embed frameworks and the strategies for connections. This paper depicts a case report in which a totally edentulous patient was restored with implant overdenture in mandible and a total denture replacement in the maxilla

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1. Introduction

The change from dentulous to edentulous state presents various difficulties to the patient just as the clinician. Bone resorption particularly in mandible is a significant factor to be considered during restoration. Conventional removable prostheses need ceaseless changes. Implant borne prostheses have demonstrated to be a powerful option as they have numerous advantageous impacts like protection of bone volume, further developed maintenance, solidness, capacity, proprioception and solace. By setting implants in the edentulous mandible and along these lines stacking them, bone resorption can be restricted as light irritative stimuli lead to changes in bone architecture., shape and volume coming about in subperiosteal development.1

This is upheld by Wolff’s law, which expresses that an adjustment of capacity prompts an adjustment of design.2 The decreased level of rotational opportunity of overdenture reduces the powers applied on the distal piece of the mandible while as yet having mucosal help. Feine and Carlsson pushed the 2-implant held overdenture as the norm of care for the edentulous mandible in an agreement meeting held in 2002.3–5 Implant overdenture (IOD) is likewise a savvy treatment choice when contrasted with implant fixed prostheses. They offer facial help, are moderately easy to build, can reestablish both dental and alveolar tissues and are esthetically more satisfactory. This case report portrays bit by bit method for manufacture of implant over denture replacement with ball and socket housings for an edentulous mandible and a maxillary complete denture.

2. Case Report

A 50 year old female reported to the department of Prosthodontics with numerous missing teeth in maxilla and mandible. Remaining teeth had serious periodontal disease. Patient had no past experience of any removable dental replacement. Patient was screened by a convention that considered his overall wellbeing and treatment prospects. The maxillary ridge was positive for complete dental replacement construction (Figure 1a). Preoperative radiographs showed serious bone misfortune and

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inadequacy in stature and width in mandible (Figure 1b). He
was educated with regards to the implant based treatment
methodologies that could be followed.

Subsequent to getting consent from the patient, it was
chosen to get every one of the teeth extracted and supplant
them with a regular complete dental replacement in the
maxillary and a two embed implant overdenture in the
mandibular jaw. Impressions were made and jaw relations
were recorded.

Systematic teeth arrangement was done at proper vertical
measurement to access helpful vertical space for a housing.

Fig. 1: a: Pre-operative intra oral; b: Pre-operative
orthopantomogram

A surgical guide was created from the diagnostic set up.
Four weeks after extraction, two (ADIN) Implants, 3.75 mm
in diameter and 10 mm long) were set at B and D positions
adhering to guideline convention (Figure 2a). Following
fourteen days, patient was given finished complete dentures.
The tissue surface of mandibular denture was relieved and
relined using temporary soft denture liner

Fig. 2: a: Post-operative orthopantomogram; b: Impressions of
maxilla and mandible

Following 4 months after healing, second stage a surgical
procedure was completed and gingival formers were placed.
Following fourteen days, for the mandibular arch A custom
perforated tray was made. Open tray impressions was made
on mandible using An elastic base impression was made
in polyvinyl siloxane (addition type) (Figure 2b). implant
analogs were attached to the impression copings and the
impression was poured in stone. An autopolymerizing
crystal base was manufactured and settled over
the gingival formers with the assistance of light body
expansion silicone material. Maxillary cast was mounted on
the Hanau’s Wide View Articulator with face bow move.
The mandibular cast was then mounted on the articulator in
centric relation. Teeth setting was completed and pursued
for patient endorsement. Retentive metal housings were
consolidated by an indirect technique. For this, after
dewaxing, ball projection analogs were joined to the cast.
Metal housings with retentive rings were put over analogs
denture was processed. Denture finishing and polishing
were done in a regular manner. The prosthesis was given
to patient and patient was instructed about the care of
prosthesis and recall schedule

Fig. 3: a: Centric Relation; b: Try in; c: Patient with final
prosthesis

3. Discussion

Implant overdentures give a decent chance to dental
specialists to work on the personal satisfaction and oral
health of the patient6. The biting efficiency with implant
overdenture is worked on by practically 20% contrasted
than a complete denture.6–8 The essential indication for a
mandibular implant overdenture is issues frequently found
with mandibular dentures, such as lack of retention or
stability, decrease in function, difficulty in speech, tissue
sensitivity, and soft tissue abrasion.

Number of Implants consolidated are to be chosen
by explicit clinical and individual requirements of the
patient8. For this situation, two implants in mandibular
prosthesis was planned thinking about physical jaw
anatomy, patient’s assumptions, and the expense factor.
The decision of connection relies on the maintenance
required, jaw structures, interridge distance, overlying
mucosa, oral capacity, and patient consistence for recall.
Single connections have following advantages 9: Less
expensive, Less lab work and Easier to maintenance.9

4. Conclusion

Restoration of the edentulous mandible is a test. Among
various treatment choices, an Implant overdenture is a basic,
savvy arrangement in the restoration of the edentulous
mandible. In spite of inescapable acknowledgment of this
treatment, a few contentions actually exist with respect to
the plan of the overdenture, determination of the fitting
connection framework, and the most ideal procedures for
the overdenture creation. Clinicians and dental experts need
to cling to sound plan standards like straightforwardness in
creation, simplicity of support and fix and cost control

5. Conflicts of Interest

The authors declare that there are no conflicts of interest
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