

A Case Report-Implant Placement in Resorbed Alveolus

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ABSTRACT

Dental implants were initiated in 1922 by Branemark, who and associates described the relationship between titanium implant and bone which termed osteointegration, defined as the direct structural and functional connection between living bone and the surface of an implant¹. This clinical review is to evaluate of the effectiveness of implants placed in severely atrophic mandible.

Key words: Atrophic maxilla, mandible, implants, osseointegration.

INTRODUCTION

Bone loss that takes place in the edentulous alveolar ridge over time often impedes the use of standard implant placement protocols, and calls for alternative or additional procedures². This case report supports the theory of increased patient acceptance of the rehabilitation procedure by using graftless solutions or nonautogenous sources of graft material. In cases of mild to moderate resorption, shorter and narrower implants³⁻⁵ as well as angled implant placement⁶⁻⁹ may be effective strategies to avoid bone grafting are usually followed, in this case bone augmentation or split ridge was not used rather, sequential osteotome with drill bits of required size was done, with care not to cause fracture to the mandible.

Case report

A 77 yr old female patient reported with a chief complaint of pain on her temporomandibular joint for past eight months. History reveals that pt is a denture wearer for past 29 years. Her Last dentures were fabricated 11 yrs back. Patient complaints of floating denture in relation to

mandible. On intra oral clinical examination, the ridge exhibited knife-edge ridge in maxilla and mandible and increased vertical dimensions. Patient was advised OPG (fig 1) which revealed severe atrophic edentulous maxilla and mandible, this case was considered to be "complex" both in terms of the surgical and restorative aspects. On routine examination, pt was did not have any systemic disorders, patients blood pressure was 130/90mmhg. treatment planning was done. Since the patient had problem with the mandible, implant retained prosthesis was planned, patient was informed in detail about the procedure and informed consent was taken. routine blood investigations were done. Under local anesthesia, dental implants were placed in relation to 34 and 44 region in between the mental foramina. Care was taken not to fracture the mandible since its severely atrophic. primary stability was achieved, cover screw were placed. After six months OPG was taken (fig 2), radiograph revealed no abnormality. Ball abutments was placed and denture retained prosthesis was given. Patient had regular follow up, with which patient did not have any complaints in occlusion nor in pain of temporomandibular joint



Fig 1: Pre operative OPG



Fig 2: Post operative OPG

DISCUSSION

Autogenous bone remains the “Gold Standard” for grafting. The autogenous graft may be harvested from many intra-oral sites. The maxillary tuberosity, anterior nasal spine, and zygomatic buttress have been reported for the upper jaw^{10,11,12}. The mandibular symphysis, ascending ramus, coronoid process, and horizontal ramus are useful sites from the lower jaw¹³, but autogenous bone grafts need patient consent and some do not accept harvesting bone from the donor site, in this case elderly patient did not accept for any augmentation, following this there are more

chances of secondary infection following the grafts and non healing of donor site. Thus implants were placed without any grafts, through which fair prognosis of the implant was achieved. In this case of severe atrophy of the maxilla and mandible, the implant was placed in the mandible without any Alveolar ridge reconstruction or Spilt ridge bone augmentation. thus consuming less time and providing accepted results in elderly patients.

Standard Implant placement protocol with suitable individual modification according to bone quality in surgeon's hand can obviate the need for extended surgical procedure.

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