Section A-Research paper
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Prosthetic Rehabilitation with Cast Partial Denture for Partially edentulous patients– A Case Report

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Abstract- Retention is the most important factor in Partially edentuluous patient.. Rehabilitation in partially edentulous patient can be challenging in Kennedys Class I and Class II situations[1]. Kennedys Class III situation is more prevalent in middle age group[2]. Acrylic partial denture or Cast partial denture is the treatment of choice for such patients

Keywords- Cast partial denture , partially edentulous patients, removable partial denture

Introduction-Restoration of partial edentulism is difficult as it is important to achieve the necessary requirement of the patient. Retention is the most important factor in such patient. It can be achieved by clasp assembly or attachment.The Rehabilitation in partially edentulous patient can be challenging in Kennedys Class I and Class II situations[1]. In such situation, fixed partial denture is not advised because of absence of distal abutment .In a survey in South India, Kennedys Class III situation is more prevalent in middle age group[2].Also fixed prosthesis has some limitations like good abutment tooth, short span bridges[3-6]. Hence, implant and removable partial denture can be planned. Cast partial denture is composed of retainer and precision attachment[7]. Cast partial denture is preferred over acrylic denture base because of its accuracy, durability, resistance to distortion, inherent cleanliness, reduced bulk[8,-11].This case report focuses on rehabilitation of Kennedys Class III partial edentulism with Cast partial denture.

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Case Report-A 52 year old male patient reported to the department with the chief complaint of missing teeth in the lower back region of the jaw since 1 year. On examination, missing teeth with 35, 36, 37 , 46, 47 and attrition with lower anterior region were present. Metal prosthesis with 26, 27, 28 and metal ceramic prosthesis with 11,12, 21,27 were present (fig.1a and fig.1b).

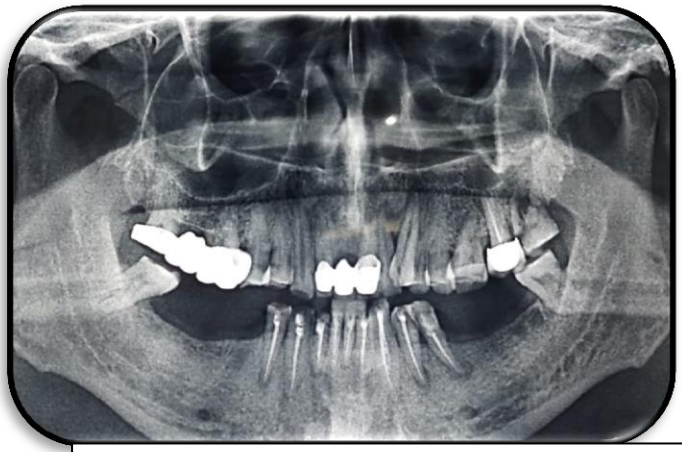
Fig1a. Intraoral photograph for maxillary arch

Fig1b . Intraoral photograph for mandibular arch

Various treatment plan was discussed with the patient but as per the financial constraints of the patient root canal treatment and Metal ceramic Prosthesis with 31,32,33,34,35,36,41,42,43,44 followed by cast partial denture replacing 35,36, 45, 46, 47 was planned.

Diagnostic impression and diagnostic mounting was done. Surveying was done (fig. 2) and cast partial denture was designed. Root canal treatment were done with lower anterior region. Occlusal rest seat preparation with 38 , 48, 45, and 34 and guiding plane with 38 and 48 were planned.

Fig.2 Suryeving of diagnostic cast



fFg. 3a OPG after endodontic treatment

Tooth preparation and gingival retraction was done followed by impression with elastomeric impression material (fig.3).

Fig. 3b tooth preparation with 11, 12, 13, 14, 15, 21, 22, 23, 24 and gingival retraction

Fig. 3c impression with mandibular arch

Wax up was done and casted . The metal try in having restseat with 45 and 34 was checked in the patients mouth for fit and accuracy of the crown (fig.4).The PFM crown was fabricated (fig.5).

Fig.4a Metal try in

fig.4b Metal try in showing rest seat with 45 and 34

Fig.5 Cinical photograph showing cementation of crowns

The PFM crowns were cemented and the necessary mouth preparations was done in the patients mouth and impression was taken (fig6) .

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fig 6. Impression with the mandibular arch

The metal framework for cast partial denture was then checked in the patients mouth for stability and fit (fig7) .

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fig7aWax pattern of the framework on refractory cast

fig7b cast metal framework on the cast

fig7c cast metal framework in the patients mouth

The jaw relations was done (fig8) and try in was checked (fig9)

fig8. jaw relations was done

fig 9a.trial in of the cast metal framework

fig 9b. trial in of the cast metal framework

The trial denture was then sent for acrylisation and finished denture was then delivered to the patient (fig 10)

fig 10a Cast partial denture framework

fig 10b Denture insertion

Conclusion-With this case report it was concluded that Cast partial denture serves as a better prosthesis in terms of retention, stability , masticatory efficiency, comfort and periodontal health of abutment if there is adequate maintenance of oral and denture hygiene was done at a regular interval.

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