ATTACHMENT RETAINED OVERDENTURE

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ABSTRACT:
Introduction: Prosthetic rehabilitation of a patient with few teeth remaining is challenging. Any conservative treatment that can delay or eliminate future prosthodontic problems should be considered. Hence the canines should be preserved so that there will be some amount of propriopectio present and reduced bone loss.

Material and Method: There were five patients, these patients were first given root supported overdenture and then given root supported attachment retained overdenture. These were rehabilitated using Stud attachments in mandibular bilateral canine region.

Conclusion: Due to various reasons the use of the attachment retained overdenture is advantageous and hence it should be used.

Key words: Root supported overdenture, Attachment retained overdenture, Stud attachment

INTRODUCTION:
In past when patients presented themselves as candidates for tooth replacement, with teeth that were badly broken, with periodontal involvement or being unable to afford financially the more advanced restorative procedures, all remaining teeth were extracted. When the patients received complete dentures in such conditions there were harmful effects to the bone, like bone resorption, and to the tissues like inflamed mucosa and to the dentures like ill-fitting dentures. There was loss of neuromuscular function, due to a decrease in the proprioceptive response resulting from the loss of teeth. Over a period of time, these symptoms worsen. To minimize the ill effects of a conventional denture, concept of tooth and/or root supported overdentures. Overdenture is any removable dental prosthesis that covers and rests on one or more remaining natural teeth, the roots of natural teeth, and/or dental implants; a dental prosthesis that covers and is partially supported by natural teeth, natural tooth roots, and/or dental implants.

Overdenture provided a stable base for the prosthesis, and enabled utilization of the advances in periodontal and endodontic therapy in conjunction with a greatly reduced crown-to-root ratio to give a viable treatment to minimize ill effects of a conventional denture. However a conventional root supported overdenture many times had to compromise on retention as the denture base had to be fabricated with considerable blockout around the retained roots. Hence an attachment retained overdenture was developed, which helped in the proper retention, stability of the denture with remaining teeth and which distributed forces evenly.

CASE REPORT:
A 50 year old male patient came to the Department of Prosthodontics, K. M. Shah Dental College, Vadodara with a chief complaint of multiple missing teeth and inability to chew the food. His medical history was not significant. On oral examination he had a few remaining teeth showing supra eruption, tilting and mobility. Teeth present were 11,12, 22, 26, 33, 43. After clinical and radiographic examination, the diagnostic casts were studied which showed sufficient interocclusal space to accommodate the stud attachments. Treatment plan included extraction of teeth with poor prognosis, root canal treatment for the retained teeth which were 33, 43 and fabrication of attachment retained overdentures. 33, 43 was selected as abutments for attachments. (Figure.1) and Pre operative OPG were taken. (Figure.2) One month after surgical, periodontal and endodontic treatment the abutments were sectioned just near the gingival margins and restored by GIC. (Figure.3) Then the conventional overdenture was fabricated by the conventional denture method. (Figure.4) After a week, the patient was recalled to carry out the placement of an attachment. The gutta percha was removed from the root canal from gates.
glliden drill and the place for post was created. (Figure.5) Then the pre fabricated metal post was cemented by flowable composite resin. (Figure.6) Later in the denture the space was created and a O rings were picked-up by self cure resin. (Figure.7) Attachment retained overdentures was delivered and post insertion instruction was given. (Figure.8) Post operative OPG was taken. (Figure.9)

**DISCUSSION:**
Best option is removable partial denture Many complete denture wearers have complaints of movement of the denture due to the resiliency of supporting tissues or instability of dentures during parafuncional and functional movements. More desirable thing is the preservation of natural teeth or roots inspite of success in the implant supported overdenture. Best option is removable partial denture attachment retained overdenture could be a better option for patients with few teeth remaining and which is not in an ideally located to support fixed partial denture. Other options
of treatment could be magnetic retained overdentures or implant supported overdenture. Bar attachments compared to stud attachments require more amount of interocclusal space, is unesthetic due to the bulkier denture base and anterior teeth arrangement is difficult. Due to these reasons, in this case stud attachment was used. The abutment selection also plays an important role in the prognosis of overdentures. In this case canines were used as they are the most important proprioceptive organs, the shape, position, larger root length, larger periodontal attachment area makes them ideal abutments. And mandibular canines are preferred as compared to the maxilla, mandible resorbs more. Retained roots primarily help in retention and positional orientation of the prosthesis. In this case the teeth were devitalised and used as secondary abutments this helps the occlusal forces to be transmitted to the underlying bone by the periodontal fiber and reduces resorption of alveolar bone. Retention and stability of overdenture can be improved by attachments or magnets. Due to various reasons the use of the attachment retained overdenture is advantageous and hence it should be used.

CONCLUSION:
Rehabilitate of patient with few teeth remaining is a prosthodontic challenge. Treatment should be done in such a way that the future prosthodontic problems don’t occur. Overdenture increases the retention, stability, support, improves the masticatory efficiency, preserves the alveolar bone, muscular pattern and preserves sensory receptors within the periodontal ligament which increases manipulative skills in handling the denture.

REFERENCES: