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Maxillary immediate denture: A case report

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Abstract
An immediate denture is a restoration for lost natural teeth and associated tissue, which is inserted immediately after the extraction. This clinical report describes about the treatment planned for a 55 year old patient with a partially edentulous upper and lower jaw. The prime consideration was given to esthetics and phonation.

Keywords: Esthetics, immediate denture, phonation.

Introduction
Esthetics is always a prime consideration for a patient seeking dental treatment. Thus, dentist should be skilled enough to fullfill the patients expectations. An immediate denture is a versatile option which can be given to a patient who's main consideration is esthetics.
Immediate denture are denture constructed before all of the remaining teeth have been removed and are inserted immediately following removal of remaining teeth. From a patient's perspective, immediate denture give them a psychological stability by contributing to an attractive smile and reducing the edentulous period.
But there are certain advantages and disadvantages related with the denture fabrication. The main disadvantage is its periodic relining and the treatment outcome is unpredictable as the prosthesis cannot be assessed before achievement. There are many unavoidable errors and technical difficulties in making accurate definitive impressions and recording interocclusal jaw registrations. The success always depends upon the precise execution of various procedures.

Case Report
A 55 year old male patient had reported to the department of prosthodontics, in Dasmesh institute of research and dental Sciences, Faridkot for the replacement of upper front teeth. A routine case history was carried out. Intraoral examination revealed multiple missing teeth, root stumps and generalized mobility of the present teeth. All treatment possibilities were explored and we had planned for an immediate maxillary complete denture.

Procedure
Thorough oral prophylaxis was carried out. The primary impression was recorded by using irreversible hydrocolloid (DentsplyZelgan alginate) (fig.2) and a diagnostic casts were poured using type IV dental stone (kalabhai stone plaster). A custom tray was fabricated using auto polymerized acrylic resin (DPI-RR cold cure) on the preliminary cast. The remaining teeth are covered with a base plate wax (DPI modelling wax) providing the space for the impression material to flow around. Border moulding was performed with a green stick compound until a proper retention was achieved (fig 3).
Wax was scraped off and perforations were done in the tray to enhance the flow of impression. Final impression was made with a medium bodied polyvinyl siloxane (Dentsply-Aquasil ultra xtra) material (fig.4).
The impression was poured with a die stone (kalabhai). After that a record base was fabricated using auto polymerizing acrylic resin on which a occlusal rim is made from a base plate wax. A tentative jaw relation was carried out and was transferred to a semi-adjustable articulator.
Teeth selection was done prior to the extraction by keeping in mind the size, shape and shade of the existing dentition. Teeth arrangement was carried out for the try-in appointment. The patient was shown the possible outcome of the prosthesis during this appointment. Now the teeth to be extracted were scraped off from the cast using BP blade in such a way that 2mm of the cast from the attached gingival was removed in order to compensate the post-extraction soft tissue shrinkage. All the undercuts and sharp margins were rounded off. Wax-up was done. The procedure of flasking was initiated. After de-waxing, the cast was duplicated and a surgical template was made by using auto polymerized acrylic resin on duplicated cast. Then the denture was processed using heat polymerized acrylic resin (DPI) using conventional technique. Both the surgical template and final prosthesis were stored in a disinfectant solution and were thoroughly cleaned before insertion.
The patient was prepared for the surgery and the extraction of remaining teeth and root stumps. Extraction of teeth were done and sutures were placed across the extraction site (fig.5 & 6). A surgical template was used to evaluate the surgical site and fit of prosthesis. With proper care, the denture was inserted into the mouth and occlusion was analysed using articulating paper (fig.7). Any premature contact was removed. Post insertions were given to the patient. He was strictly asked not to remove the denture for 24 hours. This aids

in stabilizing the blood clots. Patient was strictly emphasized on a soft diet. After 24 hours a recall appointment was made to check for any discomfort. The patient was instructed for the maintenance of oral hygiene and asked to continue using prosthesis for 1 week followed by further check-up. After 1 week the sutures were removed and relining was done for an improved retention. Patient was kept on a regular recall schedule to ensure proper fit of the denture (fig.8).

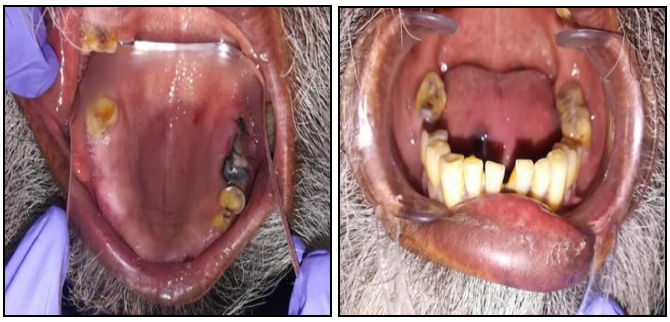

Fig 1: showing pre-operative intraoral view

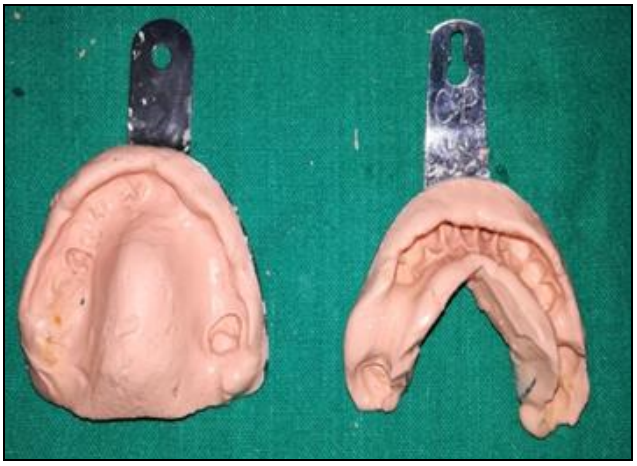

Fig 2: Showing upper and lower

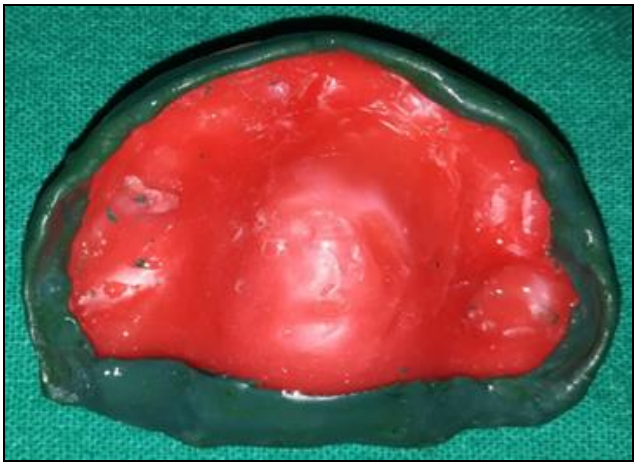

Fig 3: upper border moulding alginate impression

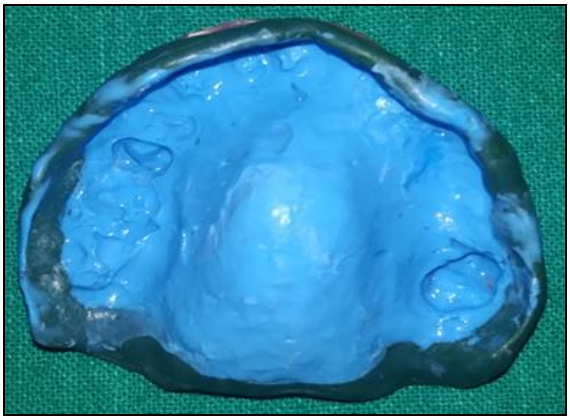

Fig 4: Impression with medium body

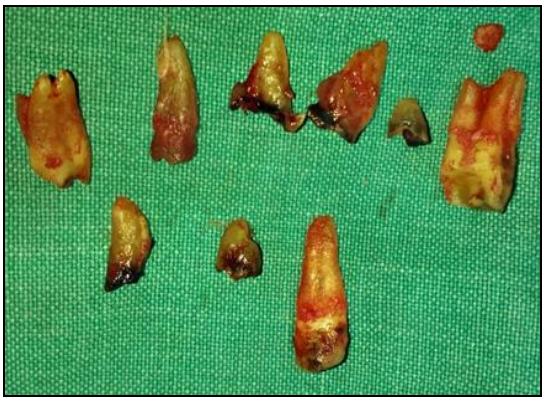

Fig 5: extraction of upper root stumps and teeth

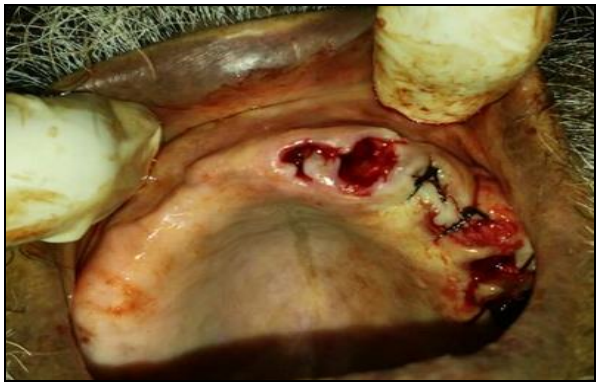

Fig 6: suture were placed on the extraction site

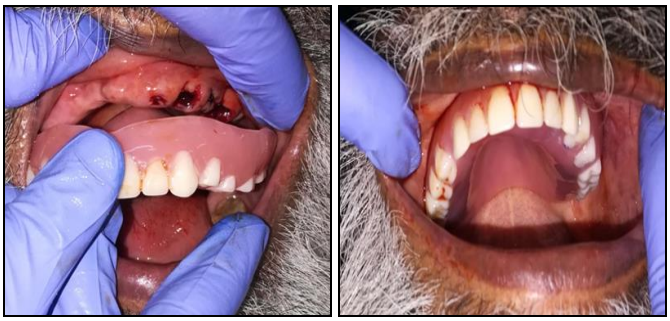

Fig 7: insertion of upper denture

Fig 8: post insertion view

Discussion

Even though the treatment outcome is unpredictable, the patient are spared the inconvenience of being without teeth in public [11].

The level of anxiety with which people face the prospect of losing all their teeth and having to rely on complete denture, is unlimited as recorded by Todd and Lader [12]. In immediate denture case selection plays an important role. There are certain limitations, not all cases are suitable for giving an immediate denture.

Indications: self-conscious people, socially active people, multiple extractions e. gperiodontally weak teeth.

Contraindications: uncooperative patients, elderly patients, poor general health, patient suffering from diabetes, tuberculosis, other debilitating diseases.

Advantages: general appearance is less affected, no edentulous period, digestive function is not interrupted, there is minimized bone resorption of the ridge, unfavourable speech and chewing habits are not likely to occur, healing is faster and less painful, patient is less apprehensive, the immediate denture acts as a matrix for controlling haemorrhage, protects the wound and prevents contamination.

Disadvantages: needs to be relined or remade.

Before proceeding, patient should be counselled and explained about the procedure thoroughly. Philosophical patients are the best candidates for this kind of treatment procedure. When used and applied correctly immediate denture serve the purpose with utmost success [1].

Conclusion

Immediate denture allow patients to continue their social and business activities without being in edentulous state. It's a challenging job for the dentist to achieve and meet the expectation of the patient, as the arrangement of artificial teeth cannot be observed at a try-in appointment. So it is always necessary to explain in hand to the patient about the limitation of the procedure.

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