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Immediate Denture - Case Report

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ABSTRACT

Dentures (also known as artificial teeth) are the prosthetic devices constructed to replace missing teeth, and are supported by the surrounding hard and soft tissues of the oral cavity. Conventional dentures are removable (removable partial denture or complete denture). However, there are many denture designs, some which rely on bonding or clasping onto teeth or dental implants (fixed prosthodontics). Dentures can help people through: Mastication or chewing ability is improved by replacing edentulous areas with denture teeth. Aesthetics, because the presence of teeth gives a natural appearance to the face, and wearing a denture to replace missing teeth provides support for the lips and cheeks and corrects the collapsed appearance that results from the loss of teeth. There are different types of complete dentures like: traditional/conventional complete full dentures, partial dentures, custom dentures, immediate dentures, implant supported dentures, snap-in dentures, overdentures, upper dentures.

Keywords: Dentures, Aesthetics

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INTRODUCTION

Immediate denture is one of the best and finest contributions that dentistry offer to patients. Worst part of the immediate denture can be traumatic and immediate introduction of the complete denture¹. Immediate denture is fabricated prior to the extraction, which is placed immediately after the extraction of remaining teeth. After so many years ago to avoid the edentulous period, the dental profession accepted and recognized the patient wish and need which is resulted in construction of immediate denture that can be placed in patients mouth immediately following the removal of last natural teeth mainly maxillary and mandibular anteriors. Nowadays, immediate denture fabrication is mainly for aesthetic reasons. The long term success of the immediate denture is mainly depends on the correct indication of clinical and laboratory procedures².

Advantages of immediate dentures include protection of extraction site, prevent tissue collapse, reduction of post extraction pain, reduction of bleeding, reduced alveolar ridge resorption, producing round, smooth and formed ridges. Aesthetics of face can restore easily. Immediate transition from natural dentition to complete denture make adjustment to eating and speaking easier.

According to the National Institute of Health, acrylic resin, or plastic, has become the highest on-demand material for dentures. It fixes perfectly into the desired space. It is easiest material to adjust and is more comfortable for the patient.

The material used for immediate denture is acrylic resin .is cheaper than porcelain which is also why a lot of people tend to prefer it more. On the downside, acrylic dentures tend to wear fast, and the shape of the teeth may even change as you continue to bite your food over the course of time.

You may need to replace your acrylic dentures within five years unless yours contain some extraordinarily strong material. Maintenance is a huge part of the life of these dentures. With proper care, they can last much longer. But if you do not clean them properly and regularly, you may end up with a gum infection. Moreover, they are slightly bulkier and more prone to breakage.

CLINICAL CASE REPORT:

A 55 year old female patient reported to department of prosthodontics with the chief complaint of missing of upper and lower back teeth, poor esthetics, loose upper and lower front teeth, and difficulty in mastication. Patient had no relevant medical history. Conventional treatment for this patient would have been extraction of upper and lower anteriors and immediately placed complete denture. The immediate denture procedures are explained to the patient prior to the procedure.

Finally decided to fabricate the immediate denture. And pre-extraction records are documented that include patient profile photographs and intraoral photographs.

This article describes about the placement of the immediate denture.

STEP BY STEP PROCEDURE:

Primary and secondary impression:

The primary impression was made using irreversible hydrocolloid and casts were poured using type IV dental stone.

Custom trays were fabricated with acrylic resins.

Maxillary and mandible secondary impressions were made with polyvinyl siloxane impression materials.

Jaw relation record:

Maxillomandibular jaw relation was made with articulator and transfer the bite blocks to patients mouth to record. Using patients existing teeth as a guide to select proper size and shade of teeth.

Posterior teeth arrangement:

Posterior teeth arrangement completed and evaluated occlusion in patients mouth. The wax up in posterior region was completed by conventional method . In anterior region, wax up was modified by creating a window. Patient was called for posterior teeth try-in prior to the extraction of remaining natural teeth.

Anterior teeth arrangement:

Jerbi's cast modification technique.

Procedure- 1

Cut away the visible crown structure in patients mouth. It should be remember some portion of the crown structure is still present beneath the gingiva.

Procedure-2

Trim the crowns in cast, trimming should equals the removal of entire crown of each tooth in cast.

Procedure-3

Begin the cut at labial depth, stone is continuously start removing from this point to junction of the gingiva and middle third areas of the facial ridge. Removal of this amount represents the collapse of labial gingival tissue towards alveolus.

Procedure-4

Another flat cut made across the facial portion of the ridge. This cut starts from crest of the ridge and extends to the mid portion of the cut made in procedure-3. This begins contouring of labial surface of ridge.

Procedure-5

Trim the lingual portion of the teeth in cast. Most cast present reproduction of continuous roll of gingival tissue which is normally lie around the lingual portion of the teeth. And this is a landmark for trimming the cast in this area.

Proceduce-6

Last procedure is to shape and smooth the surface of the trimmed area of the cast carried out. Vestibular third of the ridge should not trimmed.

Following the cast modification artificial teeth were arranged in anterior region. Final wax-up was done and resulting BPS dentures were trimmed and polished and patient was called for denture insertion immediately after teeth extraction.

Post denture insertion instruction given not to remove denture for after 24 hours and recalled to make adjustments.

DISCUSSION:

The main advantage of the immediate denture is to maintain the patient esthetics and facial profile because there is no edentulous period after extraction of teeth. Vertical relation, jaw-relation, muscle tone everything can be maintained. Due to protection of the extraction site with dentures there can be a less post-operative pain. Patients with poor oral hygiene status, poor general health and identified as uncooperative because they cannot understand the scope and limitation of the immediate denture treatment may not suitable candidate for immediate placement of complete denture. Main disadvantages of immediate denture is a tooth try-in in advance to extraction which precludes knowing what the denture which actually look like on the day of insertion. Relining of the denture may be needed later on. This is a difficult procedure, more chair side time, additional appointments and increased cost.

CONCLUSION:

Immediate denture allow patients to continue their own work without edentulous state. By the fabrication of the immediate denture we improved the comfort of the patient regarding function and aesthetics increased quality of her life. It is a challenging job for all dentist to achieve the patient expectation, as the arrangement of artificial teeth cannot be observed at a try-in appointment. So it is always necessary to explain about the limitation of the procedure. Proper follow up and care is essential.

Review after 24 hours:

General check is made of overall comfort and borders of the dentures and to ensure no major ulceration has occurred and that the socket are healing well, try to avoid occlusal adjustments.

Remove and clean the denture,

Relieve sore spots,

Do not use pressure indicating paste.

Review after 48 hours:

Seen for sore spot.

Review after one week:

Relieve sore spots,

Remove suture,

Use pressure indicating paste for better retention

Refine occlusion.

Review after 1 month:

The socket has healed and chair side temporary relines may require.

Review 3 to 6 month:

The management of loss of fit of the denture owing to bone resorption is undertaken, this may involve relines or rebases.

Review after 1 year:

A new denture is made.

Compare to conventional denture BPS denture provides perfect fit, function, and good esthetic appearance immediately after extraction of all teeth. Main disadvantage of BPS denture is cost factor. More expensive than conventional denture.

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