

IMMEDIATE DENTURES 1st part

ام د. رغداء كريم جاسم

Definitions:

- *Immediate denture is a denture which is entirely constructed before the extraction of the teeth and inserted immediately after the extraction of the teeth.*
- *A complete denture or RPD fabricated for placement immediately following the removal of natural teeth. After healing, the denture can be relined and refitted to be used as a definitive denture.*

ADVANTAGES OF IDS:-:

1. The primary advantage of an immediate denture is the maintenance of a patient's appearance because there is no edentulous period.
2. Circumoral support, muscle tone, vertical dimension of occlusion, jaw relationship, and face height can be maintained. The tongue will not spread out as a result of tooth loss.
3. Less postoperative pain is likely to be encountered because the extraction sites are protected. Some authors have discussed whether immediate dentures reduce residual ridge resorption.
4. Bandage or dressing effect that the prosthesis offers to wound extraction, bandage effect tends to control hemorrhage, to prevent large outside contamination of wound and to maintain drug or other therapeutic agent at the site of wound.
5. It is easier to duplicate (if desired) the natural tooth shape and position, plus arch form and width.
6. The patient is likely to adapt more easily to dentures at the same time that recovery from surgery is progressing. Speech and mastication are rarely compromised, and nutrition can be maintained.
7. Overall, the patient's psychological and social well-being is preserved. The most compelling reasons for the immediate denture prescription are that a patient does not have to go without teeth and that there is no interruption of a normal lifestyle of smiling, talking, eating, and socializing.

Disadvantages:

- 1) Increased complexity of clinical procedures.
- 2) No possibility of "Try-in" of the anterior teeth to get the patient's acceptance for esthetics and phonetics.
- 3) Increased treatment time and cost.
- 4) Subsequent relines, rebases or remakes are necessary in a short period of time.

- 5) Increased patient discomfort
- 6) There is potentially less retention.

Post-placement adjustments are more numerous than with conventional complete dentures

Indications:-

- 1-Hopless remaining teeth (caries, periodontal diseases or malocclusion)
- 2-Educated patient with daily social activity (doctors, lawyers and teachers).
- 3-patient with stable health condition.
- 4- Patient don't mind some additional visits or cost.

The best patient for immediate dentures is the philosophical type. Their motivation for denture is the maintenance of health and appearance, and they accept replacement of natural teeth that can't be saved as normal procedure.

Contraindications:

- Patients with general medical conditions which make them poor surgical risks such as cardiovascular diseases or other systemic abnormalities.
- Patients with acute infections which may require surgical drainage.
- Patients with a limited mental capacity or who are emotionally disturbed and uncooperative.
- Patients with neurologic or psychological conditions.
- Patients who have undergone radiation therapy should not be considered for immediate dentures because of the danger of osteoradionecrosis.
- Patients with limited or no neuromuscular control.
- Patients with a severe gagging reflex. Conditioning of such patients with a training appliance, such as a mouth guard, is indicated before the teeth are removed

Types Immediate Dentures:

1. Immediate interim denture:

A temporary dental prosthesis constructed to replace the lost dentition and associated structures of the maxillae and /or mandible, and inserted immediately following removal of the remaining natural teeth (Complete clearance), i.e. the denture is placed at the same appointment of extraction.

- *It is used for a short interval of time for reasons of esthetics, mastication, occlusal support, or convenience;*
- *it is worn only during the healing period until more definitive prosthetic therapy can be provided .*

2. Immediate transitional denture:

A Temporary partial denture to which artificial teeth are added one or two at a time as natural teeth are lost until it finally serves as a temporary complete denture.

A transitional denture may become an interim complete denture *when all of the natural teeth have been removed* from the dental arch.

3-Immediate Conventional Complete denture.

A denture placed immediately after the extraction of the remaining 6 anterior teeth, the posterior teeth having been removed 6 weeks prior to making the dentures.

3. Immediate Definitive cast partial denture.

4. Diagnostic Immediate denture:

- Used to diagnose a patient's problem.
- The posterior segments consist of flat occlusal blocks made of plastic resin.
- Indicated for patients with advanced periodontal disease.

Also immediate denture can be classified into:

I – Immediate Dentures without Surgery (without Alveoloplasty)

1. Socketed (Open-face) denture

2. Flanged denture without alveolectomy

a. Complete flange b. Partial flange

II – Immediate Dentures with Surgery (with Alveoloplasty)

3. Flanged denture with alveolectomy

a. InterSeptal alveolectomy b. Radical alveolectomy

III- Delayed immediate denture

IV- Controlled immediate denture

Immediate Dentures without Surgery (without Alveoloplasty)

Example: Immediate denture for upper anterior teeth:

1. *Socketed (Open-face) denture*

- In this type the teeth are extracted and no more surgery is performed.
- There is no labial flange due to insufficient space for a labial flange or due to presence of undercuts anteriorly.
- The anterior teeth extend a few millimeters into the labial aspect of the sockets of their natural predecessors

Indications:

1. Sufficient retention can be obtained from the rest of the denture-bearing area. So it is used in the upper and not recommended for the lower jaw.
2. deep undercuts are present on the anterior labial and buccal residual ridges
3. High lip line and an active upper lip would expose an unaesthetic labial flange
4. minimal amount of surgery is considered desirable.

Contraindications:

- (1) periodontal disease exists with a substantial amount of bone loss which makes an acceptable cosmetic effect difficult.
- (2) an anterior fixed partial denture has been worn resulting in an uneven contour of the anterior residual ridge

2. Flanged denture

- It is indicated in cases having sufficient available space to accommodate a labial flange without giving the feeling of excessive lip fullness.
- On replacing the plaster teeth by artificial ones, either one tooth is removed each time, or removes all teeth on one side of the arch, keeping the more acceptable side as a guide for the arrangement of artificial teeth.

2. Flanged denture without alveolectomy

- a. Complete flange b. Partial flange

the presence of a flange gives better protection to the sockets from food and trauma and thus assists more rapid healing. It may be possible to use this type of denture when there has already been considerable loss of supporting alveolar bone following periodontal disease.

a. Complete flange:

indications

- (1) *there is no large anterior bony undercuts*
- (2) *normal lip line and lip activity*
- (3) *There is bone loss around periodontally involved teeth*

Contraindications

- (1) *pronounced undercuts are present in the anterior labial region of the alveolar residual ridge.*
- (2) *fullness of the lip would produce an unaesthetic result.*

b. Partial-flange:

The extension of the shortened or partial flange is just beyond the maximum contour of the alveolar process, to a point where the undercut engaged can be accepted by

compression of the overlying soft tissues. The flange ends as a knife edge between the gingival margin and the vestibular sulcus.

II – Immediate Dentures with Surgery (Alveoloplasty)

3. *Flanged denture with alveolectomy*

Indication

- ❖ *Where there is marked protrusion of the upper alveolar process, both appearance and denture function can be improved by reshaping the alveolar bone at the time of extraction. This is advisable when the patient has a short upper lip.*

Flanged denture with alveolectomy

a. InterSeptal alveolectomy

The interdental septa are removed after the extraction of the teeth and the outer cortical plate is then collapsed lingually onto the inner plate. This reduces the labial undercut, creates sufficient room for a complete labial flange and at the same time reduces the size of the sockets that have subsequently to be filled with new bone.

Advantages:

1. No cortical bone is removed and post-surgical resorption is reduced.
2. Surgery is less traumatic than radical alveolectomy.
3. Less interference with facial form.

Technique:

- after extraction of six anterior teeth a bone rongeur is used to cut a V shaped wedge from the labial cortical plate distal to the canine on each side
- the bony septa are then removed using bone rongeur
- a chisel is inserted deep in the sockets and with the help of a mallet, knocks are applied with the chisel edge directed towards the labial cortical plate
- hand pressure is applied to the labial cortical plate towards the palate cortical plate
- excess soft tissue is trimmed and the wound is sutured using 000 black silk suture
- immediate denture insertion and patient instructions are the same

b. Radical alveolectomy

Indications:

- a. Prominent premaxilla e.g. in patient with an Angle Class II
- b. Patients who have a short and thin upper lip and a prominent labial alveolar ridge
- c. limited anterior interalveolar space and deep vertical overlap.
- d. when diametrically opposed alveolar undercuts are present.

Technique:

- 1- first extraction of the six anterior teeth is carried out
 - 2- A mucoperiosteal flap is reflected by making two inclined incisions distal to the canines
 - 3- using bone rongeur the labial alveolar plate of bone is cut off
 - 4- the bony septa are cut off using a side cutting rongeur
 - 5- A bone file is used to trim away any remaining sharp edges
 - 6- the flap is repositioned and excess soft tissue is trimmed
 - 7- suturing of the flap is carried out using 000 black silk suture
 - 8- the immediate denture is inserted in the patient's mouth after being lined with tissue conditioning material
 - 9- the patient is instructed not to take off the denture till the next appointment 24 hours later
 - 10- a suitable antibiotic is prescribed and the patient is instructed to make cold fomentation to minimize the hematoma formation
- NB:** for both techniques of immediate dentures with Alveoloplasty a construction of a transparent acrylic surgical template over a duplicate cast of the reduced one is helpful in detecting areas that require future surgical modification before suturing

III- Delayed immediate denture

- *It is inserted after one or two days of teeth extraction.*
- *It can be used to replace posterior and anterior teeth at the same time.*

Indications:

- a) *Where there is pathology (large cyst) extensive surgery*
- b) *Where many teeth have to be extracted with hospitalization*

V- Controlled immediate dentures (Two-step):

All the patient posterior teeth are extracted, and the patient is allowed to wear an interim partial denture until healing is complete, and the patient becomes accustomed to the denture treatment.

To be continue2nd part