

# prosthodontics



**Prosthesis :** •

Is the replacement of an absent part of the human body by some artificial part, such as eye, a leg or a denture. •

**Prosthetics :** •

Is the art and science of supplying missing parts of the human body. In dentistry the term prosthetics becomes prosthodontics. •

**Prosthodontic :** •

Is the branch of dental art and science that deals specifically with the replacement of missing dental or oral structures. •

**Another definition for prosthodontic :** •

It is defined as the branch of dentistry that deals with restoration and maintenance of oral function, comfort, appearance and health of patient by replacement of missing teeth and oral structures with artificial substitute. •

The replacement of missing teeth in a partially edentulous arch may be accomplished by a fixed or by removable partial denture (removable prosthesis). •

**Fixed prosthesis :** •

Is not designed to be removed by the patient, this type of a restoration is (a fixed partial denture). •

**A removable partial denture :** •

Is designed so that it can be removed conveniently from the mouth and replaced by the patient himself. •

# Fixed Prosthesis

It is not designed to be removed by the patient .





**Teeth Prepared**



**Ceramic FPD Ready for insertion**



**Finished Case Fixed PD in place**

R.P.D may be entirely tooth supported (tooth bound) or may derive its support from both the teeth and the tissue of the residual ridge (tooth tissue support).

The denture base of the tooth-born R.P.D derives its support from teeth at each end of the edentulous areas.

A tooth – tissue supported R.P.D has at least one denture base that extend anteriorly or posteriorly terminating in a denture base portion that is not tooth supported, such as a base extending posteriorly on a removable partial denture qualifies the restoration as distal extension denture.

# Removable Partial Denture

Is designed to be removed and replaced by the patient

- RPD Could be:

- 1- Tooth supported





- **2- Tooth tissue support**



**Tooth-Tissue supported RPD**





**A combination of Fixed and RPD restorations for the lower arch**

The objectives of prosthodontic treatment •  
of partially edentulous individuals with  
removable restorations are:

The elimination of oral disease to the greatest –  
possible extent and prevention of tooth  
migration.

The preservation of the health and –  
relationship of the teeth and the health of the  
oral and Para oral structures.

The restoration of the oral functions with and –  
esthetically pleasing end results.

# Objectives of Partially edentulous treatment with Removable restorations

## 1- Elimination of oral disease & prevent tooth migration



Extrusion of upper teeth into opposing edentulous area

## 2- Preservation of health and relationship of teeth



**Preservation the occlusal relationship between opposing teeth**



**3-Restoration of  
oral function and  
esthetics**



**Anterior view of PD  
Restoring the esthetic**

## Success of R.P.D •

The success and professional happiness can be more readily obtained by following these guidelines: •

Establish a genuine rapport to promote trust and confidence. •

Thoroughness in diagnosis and treatment plan. •

Identify problems and their causes. •

Make the patient fully aware of the correlation between dental and general health as adjuncts to total well-being. •

Explain the suggested treatment plan and alternate plans including time commitments for treatment. •

Make the patient fully aware of their responsibilities in the success of the treatment by conscientious home care and periodic recall visits. •

The cost should be explained at the beginning because some can afford expensive treatment, others can not. •

The dentist should avoid an overly optimistic prognosis. •

**Notes about the clinical procedures of R.P.D construction:** •

The clinical procedures of RPD construction start with choosing the patient and seeing if the case is indicated and suitable for this type of treatment or not. This includes determining the psychological state of the patient and also his educational level, the condition of the oral tissues. •



Confirm the treatment by determine the treatment plan and design. •

Impression taking: •

select the smallest tray that will fit the dental arch and residual ridges. The teeth should be centered in the trough of the tray with about 6 mm clearance around the teeth and the edentulous ridge. Tray flanges should not extend outward into the cheek or tongue. If there is a choice between a trays of the correct length or one of the correct width, select the one having the correct width and curvature, then lengthen it with wax.

# Impression Taking



**Perforated stock trays**

***Wax is added to the stock tray in certain – cases ex. Deep palate, F.E.E, and even for a very long bounded span. And this is to:***

**Have a stable tray during impression taking:** •  
in F.E.E the remaining anterior teeth will act as stoppers, and as no teeth present posteriorly there will be some kind of rotation and unstability, this can be avoided if wax is added.

**Have even thickness of alginate:** •  
the more the uneven thickness, the greater the dimensional changes.

Wax is added to the stock trays in

- 1- FEE
- 2-Deep palate
- 3- long bounded span

### **Aims of wax addition**

- 1- Have a stable tray
- 2- Have even thickness of alginate
- 3- Adequate pressure and recording fine details



Help to bring alginate into a close proximity to the ridge with adequate pressure; this will give superior results in recording of details. •

After inserting the tray, press on the region of the canines then on that of the second molars then keep the tray stable by pressing on the premolars. •

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# Diagnosis and Treatment Planning for RPD

The examination include the following investigations

**1- Patient's Complain**

**2- Clinical Examination**

**A-Extra oral diagnosis**

**B-Intra oral examination**

**3- Radiographical Examination**

**4-Diagnostic Cast (Study cast)**

**A-Extra oral Diagnosis:** Includes general look of the patient as a whole

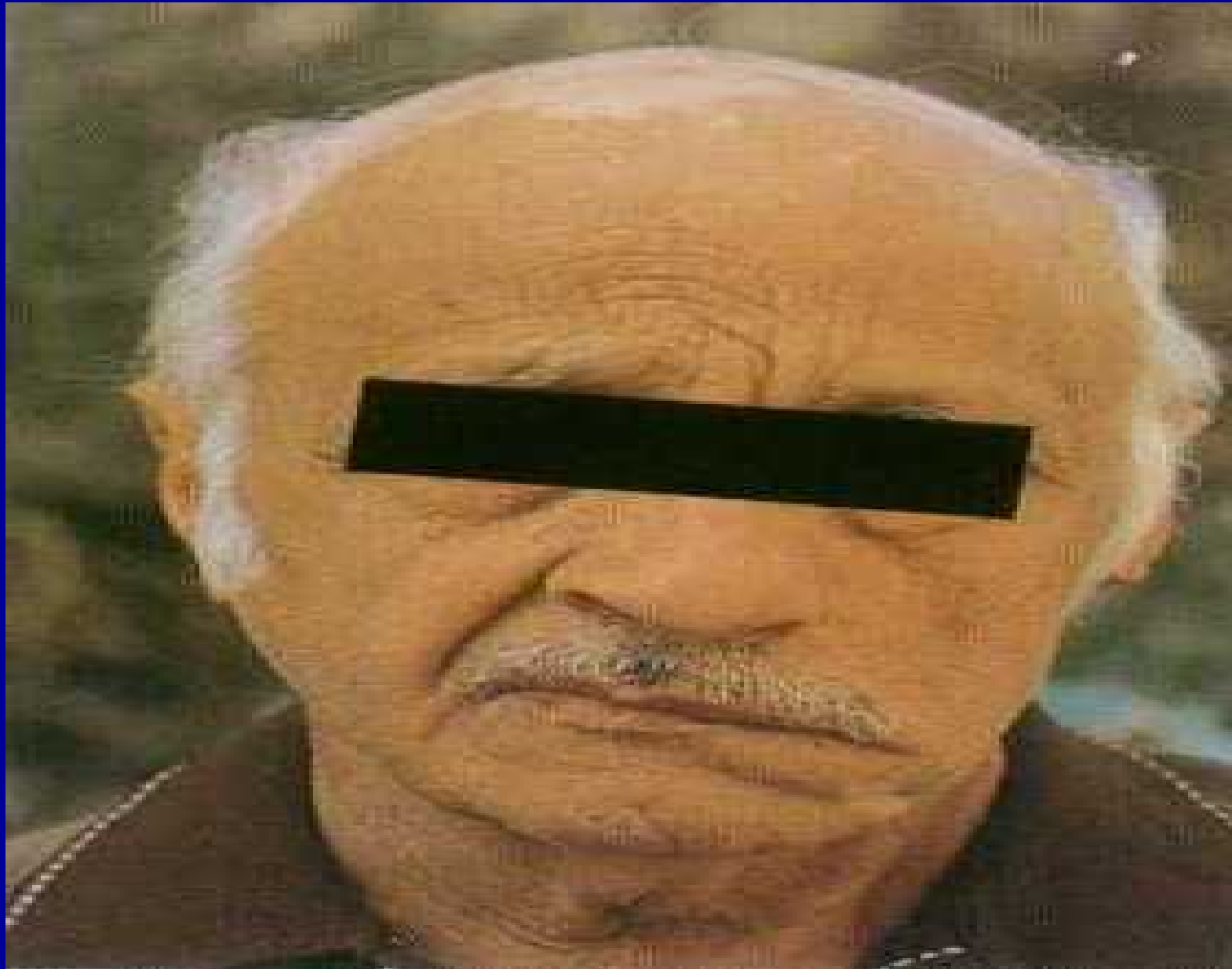


**Symmetrical face (Front View)**





**Lateral View**



**Patient with facial palsy (A symmetrical face)**

**B-Intra oral Examination:** By using our fingers or exploratory instruments( Mouth mirror, dental probe, periodontal probe, pulp tester .we have 2 types

**1- Visual Examination**

**2- Digital Examination**

**1-Visual Examination:** Visually we estimate the following

**1- Caries Susceptibility**

**2- Position of remaining teeth**

**3- Condition of soft tissue**

**4- Occlusion of teeth**



**Visual examination for caries**



**Visual examination for teeth position**



**Occlusion of teeth**



**Soft tissue condition (Denture Stomatitis)**



## **2-Digital Examination:** Includes the Following

- 1- Firmness of remaining teeth**
- 2- Condition of periodontal tissue**
- 3- extent of caries**
- 4-Condition of restored teeth**
- 5-Condition of soft tissue**
- 6- Presence of Tori**
- 7-Examination of saddle area**
- 8- Evaluation of depth of lingual sulcus**



**Examination of teeth mobility**



**Examination of periodontal health**



**Examination of the Extent of caries**





**Condition of restored teeth**



**Examination of the condition of soft tissue**

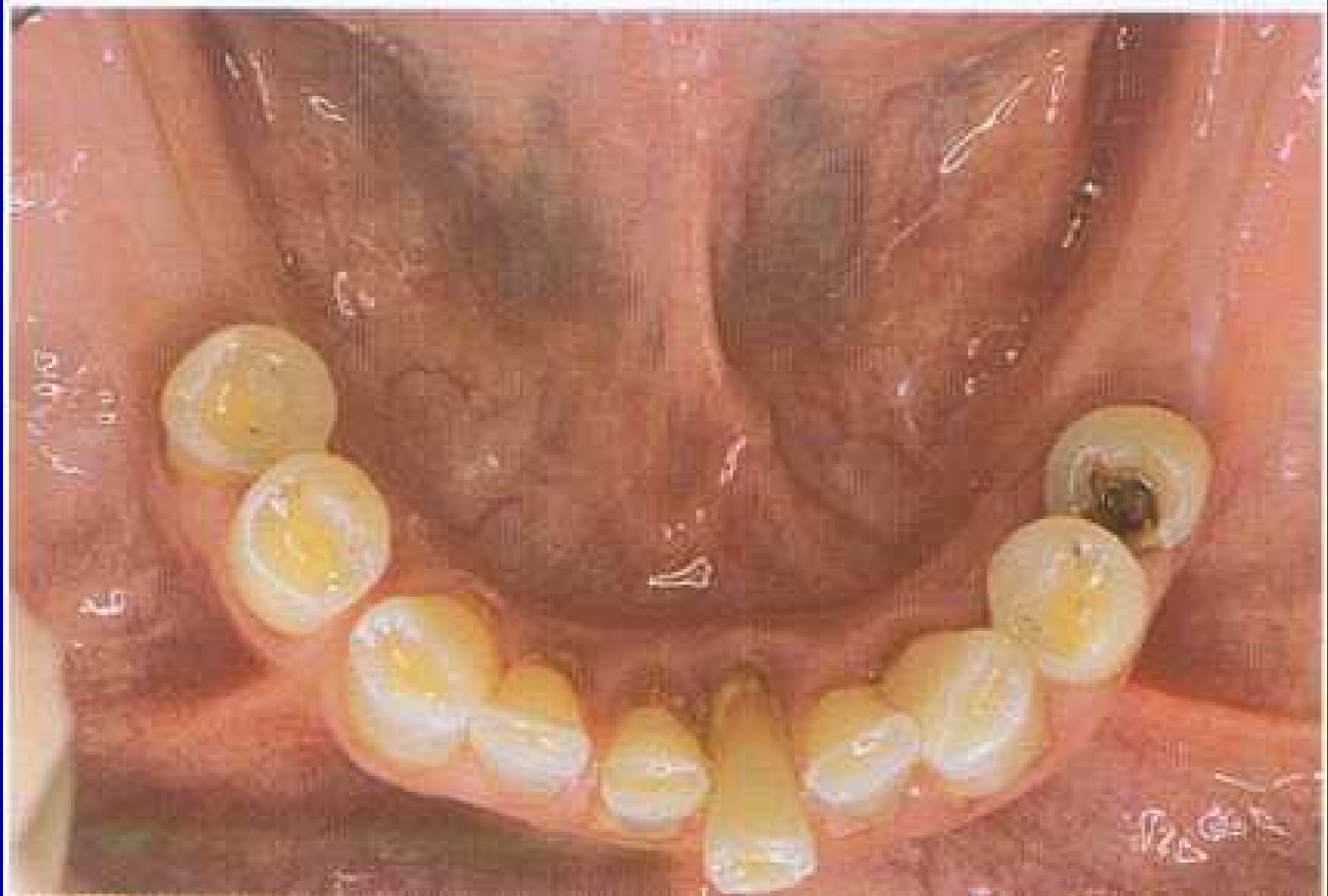


**Torus palatinus**

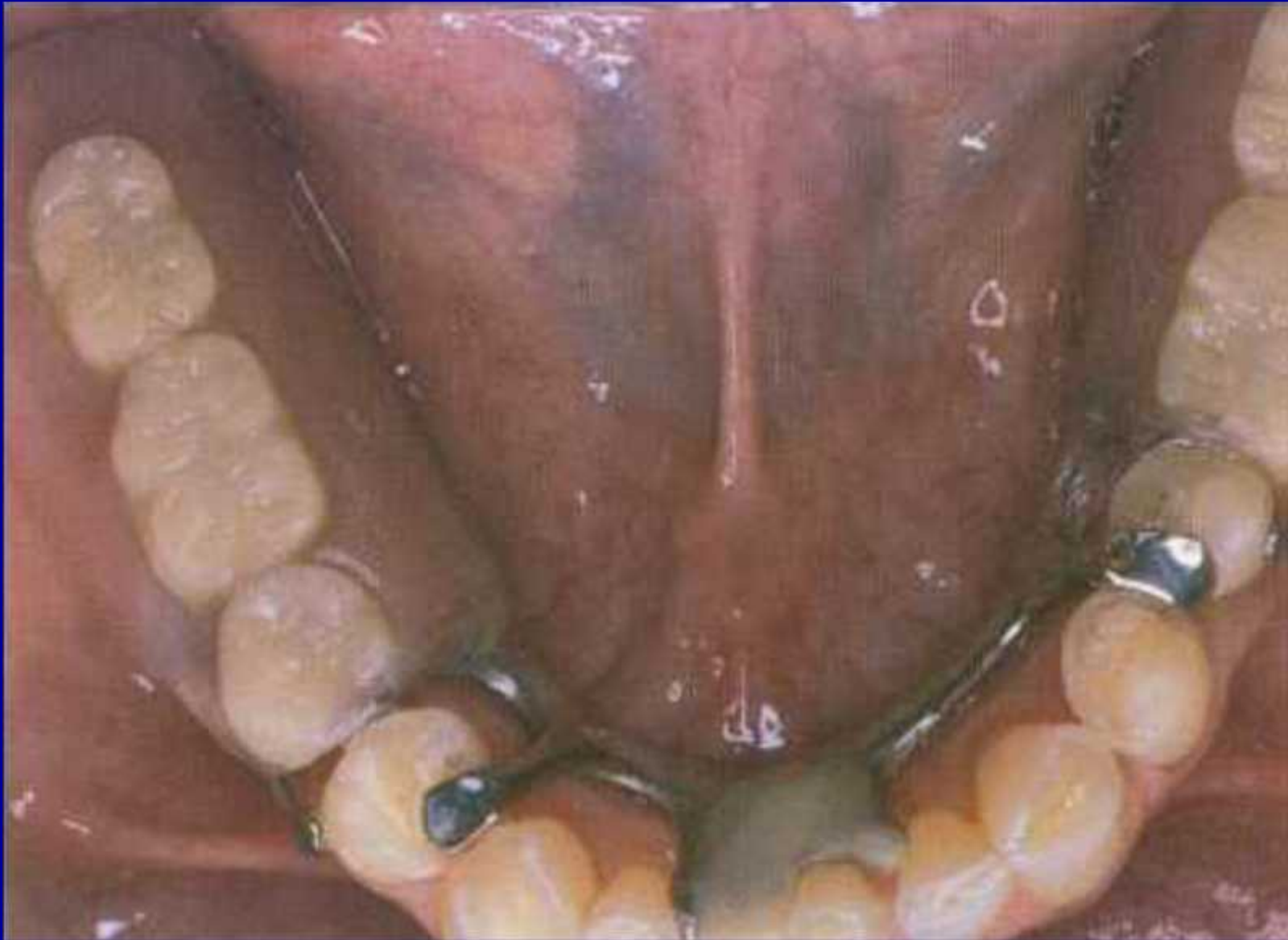


**Torus mandibularis**





**Examination of saddle area**



**Depth of the lingual sulcus**

### **3-Radiographical Examination: It includes**

**1- Quality of alveolar bone**

**2-Root morphology**

**3-Periodontal pockets**

**4-Caries extent**

#### **Types of X-rays:**

**1-OPG**

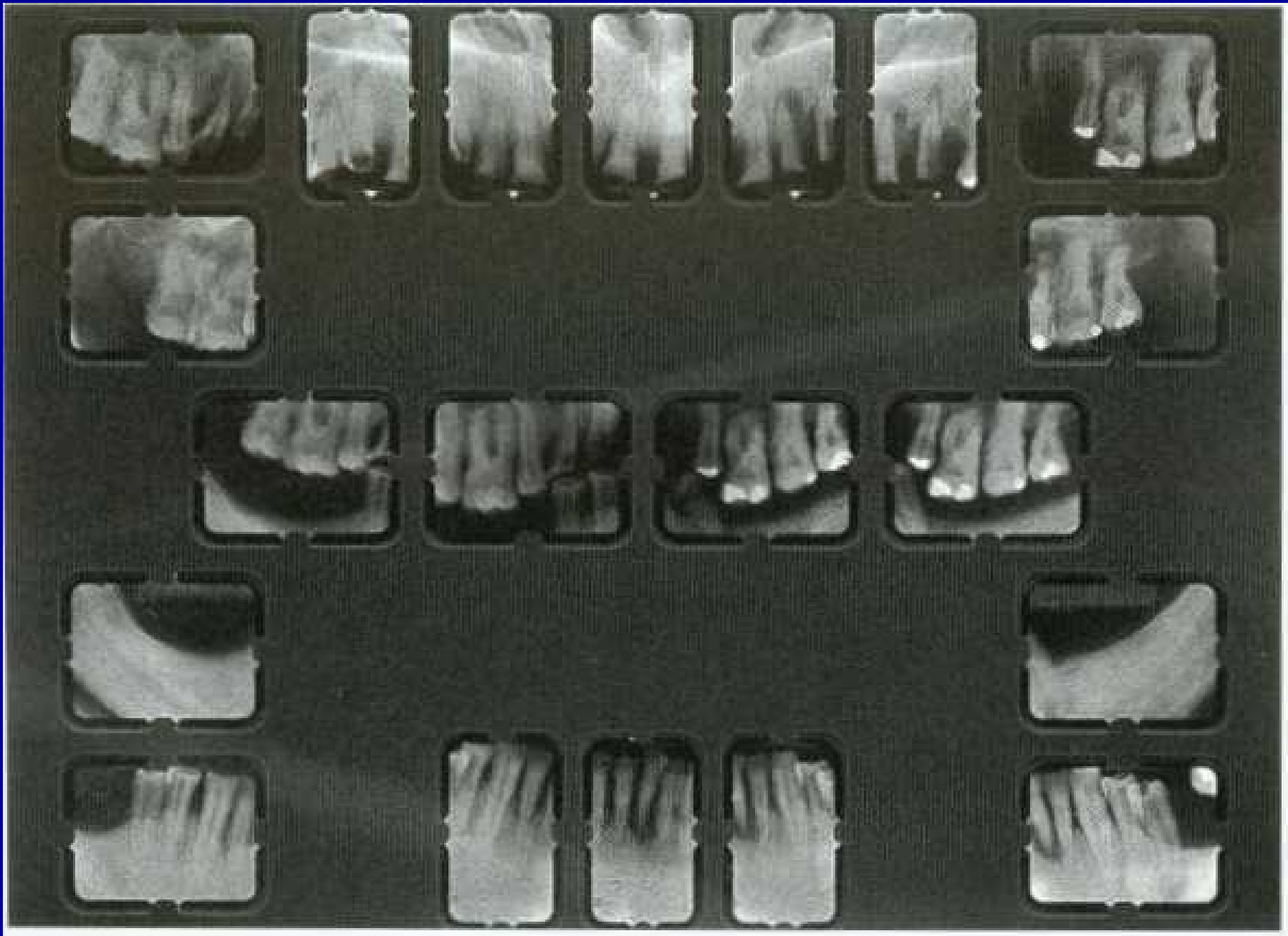
**2-Full mouth periapical**

**3-Bite wings**

**4-Occlusal**



**Orthopantomograph (OPG)**



**Full Periapical Radiograph**



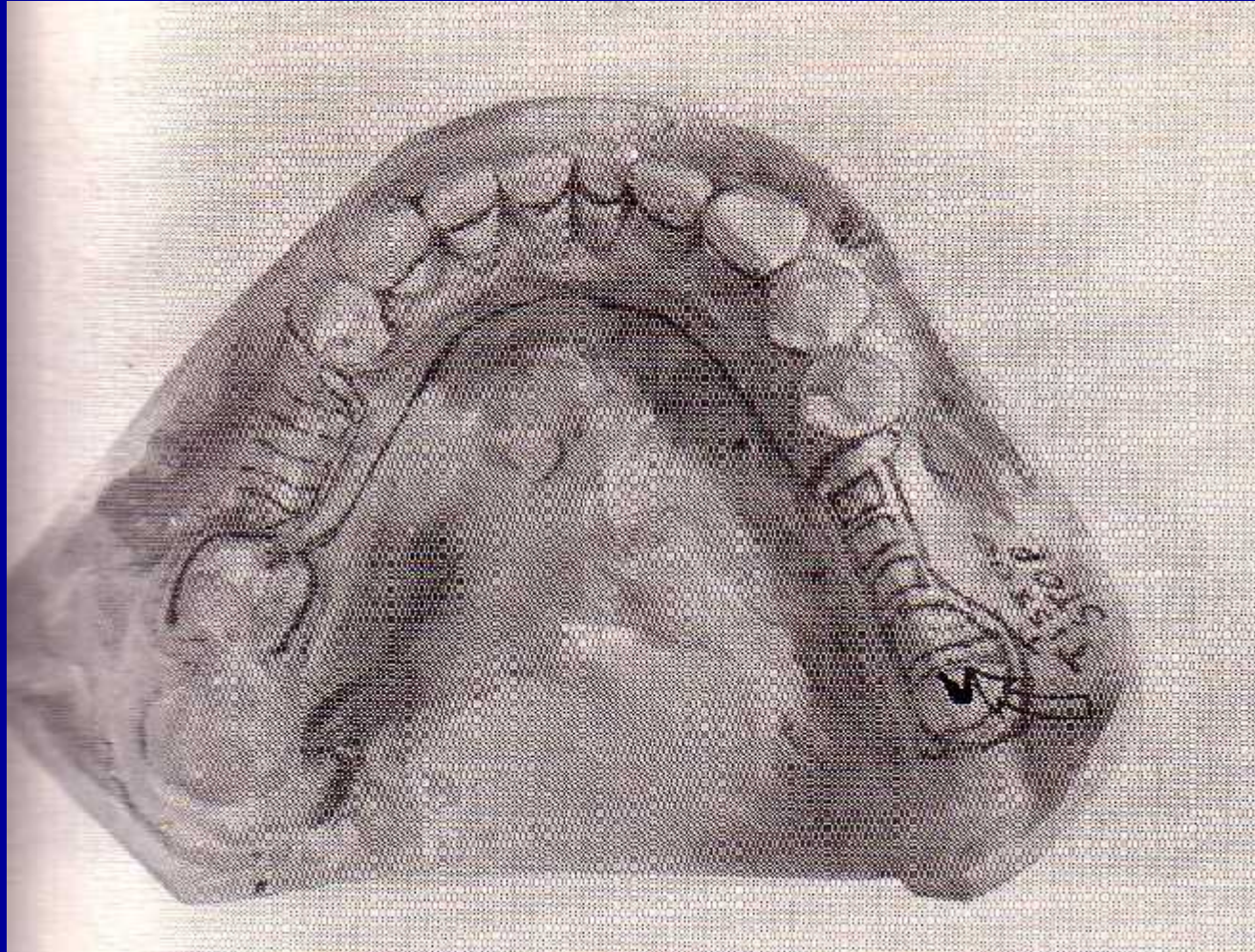
**Periapical X-Ray**



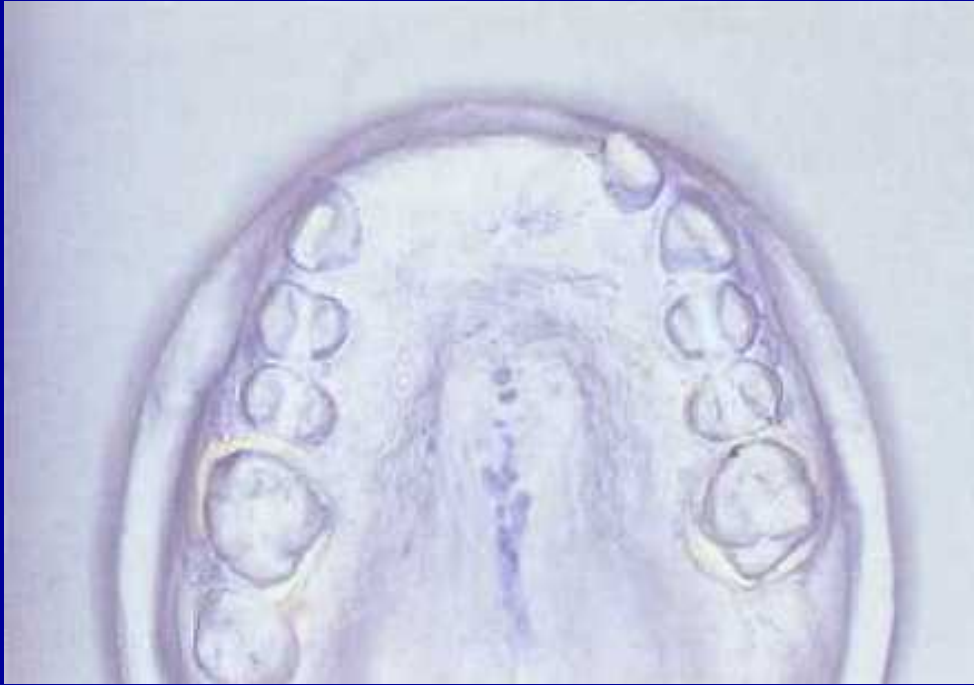
**Periapical X-Ray**



## 4-Diagnostic Cast







**Cast surveyed**



**Treatment plan** : it includes

- 1- Periodontal treatment
- 2- Oral hygiene habits
- 3- Restoration of teeth
- 4- Surgical treatment
- 5- Crown and bridge work
- 6- Type of material used for denture construction
- 7- Cost of PD

**Prognosis:** Many factors affect the prognosis

- 1- Patient's age
- 2- Number of remaining teeth
- 3- Height of alveolar bone
- 4- Shape and length of root
- 5- Mobility of teeth