"Dental Restaurations."

Prosthetic Dentistry

Dr. habil. Krisztina Márton

Associate Professor, Head

Department of Dental Preclinical Practice

SEMMELWEIS UNIVERSITY
The Role of the Teeth

- Mastication
- Speech
- Esthetics
Defects Caused by Edentulousness

- Reduction of the chewing capacity
- Disturbances in the speech
- Esthetic problems
- Pathological movement of the teeth
- Overloading of the teeth
- Extension of the tongue
Reduction of the Chewing Capacity

- The loss of premolar or molar teeth reduces the effectiveness of mastication.
- The loss of front teeth makes the biting difficult.
Speech (Fonation) Disturbances

- Formation of certain consonants can be affected, depending on the location of the edentulous area

Extension of the Tongue
Unfavorable Esthetics

- Edentulousness
- Upset face harmony
Pathological Shift of the Remaining Teeth

- Tilting
- Overeruption
- Torsion
- Bodily shift
Consequences of the Pathological Tooth Shift

- Loss of the contact point
- Unfavorable direction of the occlusal load
- Periodontal disease
- Overloading of the remaining teeth
Tilting
Decreased occlusal vertical dimension due to the loss of the posterior teeth.

Overeruption of the antagonistic teeth.
Overloading of the anterior teeth.
Wear
Upset face harmony
Overeruption
Roles Of the Prosthetic Appliances

- Restoration
- Prevention
Roles of the Prosthetic Appliances

- Restoration
  - Rehabilitation of the chewing capacity
  - Treatment of the speech disorder
  - Esthetic rehabilitation
Roles of the Prosthetic Appliances

- Prevention of further disorders
  - Overeruption of the antagonistic teeth
  - Tilting of the neighbouring teeth
  - Overloading of the remaining teeth
Types of the Prosthetic Appliances

- Fixed
- Removable
Steps of Making a Prosthetic Appliance in General

- **Clinical phases**
  - History, examination
  - Preparation of the mouth/tooth
  - Impression taking, registration of the maxillomandibular relationships
  - Insertion
  - Control

- **Laboratory phases**
  - Model casting, articulator mounting
  - Making of the appliance

Information transfer
Impression Taking Procedure

- Creating the negative likeness of the jaws
- Technician obtains the positive likeness by casting the impression
Fixed Restorations

- Inlays
- Onlays
- Solo crowns
- Fixed bridges
- Fixed splints
- Dowelcore
Inlay and Onlay

- An **inlay** is similar to a filling and lies inside the cusp tips of the tooth. They are custom-made to fit the prepared cavity and are then cemented into place.

- An onlay is a more extensive reconstruction that covers one or more cusps of a tooth.
Composite inlay bridge
Preparation of Inlays and Onalys

Inlays and onlays are applied in two dental visits

- At the first visit, the old filling, or decay, is removed, and the tooth is prepared for the inlay / onlay.
  - The dentist will then take an impression of the tooth, and send this impression to a dental laboratory. This impression will be used by the laboratory to construct a custom-made porcelain, or gold inlay / onlay.
- At the second visit dentist cements the inlay into the tooth
Solo Crowns

- Dental crowns, are dental restorations which encase a tooth and are cemented in place.
- Aims of making a crown:
  - Restoration of a destructed tooth
  - Esthetic reason
  - Clasp holding (for a removable appliance)
Solo Crown

- Tooth is prepared by the dentist
- Crown is made by the technician
A dental **bridge**, otherwise known as a fixed partial denture, is a prosthesis used to replace missing teeth and is not removable by the patient.
Bridge

- Preparation of the abutment teeth is done by the dentist
- Impression is taken of the prepared jaw
- Appliance is made by the dental technician according to the impression
Post and Core or Dowelcore

- Also known as dowel and cores, these are cemented restorations used to support a **crown** or a **bridge** when there is not enough natural tooth structure to do so.

- The dowel is the post-like portion of this restoration. It is a structure that is inserted within the body of the root of a tooth that has had a previous **root canal therapy**.

The core portion of this restoration is the part that supports the **crown** or **bridge**. It is the part that can be seen after cementation of a dowel and core.
Removable dental appliances

- Removable partial denture
- Complex partial denture (fixed + removable)
- Overdenture
- Complete denture
Removable Partial Denture

RPD can be inserted and removed from the mouth by the wearer, without the destruction of the appliance.
Removable Partial Denture

- Impression is taken by the dentist of the denture bearing jaw
- Appliance is made by the technician
Complex Partial Dentures

- Fixed appliance
- Removable appliance retained on the fixed part
Complex Partial Dentures

- Telescop retained complex partial denture
Complex Partial Dentures

- Bar joint attachements
Overdenture

- A complete denture that is supported by both soft tissue and natural teeth that have been altered so as to permit the denture to fit over them.

- The altered teeth may have been fitted with short or long copings, locking devices, or connecting bars.
Complete Denture

- Complete denture replaces all of the teeth in either the upper or the lower jaw
- Impression is taken by the dentist
- Appliance is made by the technician
Implant Supported Prosthetic Appliance

- Removable appliance
Implant retained fixed bridge