**Introduction of Removable partial denture**

**Lec # 14**

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We talked about RPD in the 2nd semester last year and you are going to apply it next year enshalla .

**\*So what’s dental prosthodontics ?**

It’s the part of dentistry which deals with replacement of any soft or hard tissue structures

**\*What is the removable partial prosthesis ?**

It’s a prosthesis that replaces part of the teeth not all of them and can be removed “not fixed”.

\*The dr. showed a pic and asked about the treatment options that can be done for this patient >> implants , fixed bridge , RPD , we can put 2 implants and apply a bridge on them but its not a good option , you can accept this situation and do nothing for him .

The dr showed another pic “part of the anterior teeth were missing” >> the treatment options could be ; implants , resin bonded bridge , complete denture but this isn’t a good option , also another option is implant with a partial denture on top of it , Co/Cr partial denture , or we can do nothing for him .

Note : if we chose to do a conventional bridge there will be some complications like pulpitis and loss of vitality .

Note : in this case we prefer to do the resin bonded bridge a cantilever bridge because it will be able to move with the teeth so there wont be decementation , whereas the fixed-fixed bridge is more rigid and will decement from the teeth .

**\*Indications of the RPD :**

1- long edentulous span

2- when the pt cant afford for an implants

3- free end saddle

4- when we have so much bone loss and at the same time we cant do bone augmentation so we do RPD

5- can be used as a provisional

6- In any case that has loss of hard and soft tissue

7- when there is multiple missing teeth

8- excellent oral hygiene ( actually its not an indication , it’s a **must** when we want to put an RPD)

**\*Types of RPD :** 1- acrylic 2- Co/Cr

Generally the acrylic RPD is used for : esthetic , space maintainer , to establish an occlusal relationship

\* how can we reach the retention in complete denture? By creating a negative pressure that is achieved by a proper peripheral seal .

\* how can we achieve the support in complete denture ? by the primary and secondary support areas.

**\*The components of RPD :**

**1- direct retainer “clasps” :** it provides retention , it engages in the under cut

**2- rest** : the rest seat provides support for the RPD ( also the type of the RPD aids in the support)

**3- major connector** : the part that connects the components on one side of the arch to the other side

**4- minor connector** : the part that connects everything with the major connector

**5- saddle** : the area where the teeth are missing , its replaced by a mish

**6- guiding plates** : part of the RPD , whereas the guiding planes are part of the teeth

**\*Classification of the RPD :**

1- support classification : tooth borne , mucosa borne , tooth and mucosa borne

2 - kennidy classification : according to the number and the place of the edentulous spaces

Class1 > bilateral edentulous free end saddle

Class2 > unilateral edentulous free end saddle

Class3 > unilateral bounded saddle

Class4 > anterior bounded saddle crossing the midline ( there is no modification for this class )

**\*Firstly** , to do an RPD we must take an impression . Usually we take it with **alginate or silicon or agar >> they are all an elastic material**

- why would we use an alginate as an impression material ? because its cheap and elastic material (doesn’t tear in under cuts ) and has a quick setting time

- what’s the limitations of alginate ? we have to pour it immediately . ( in case the lab was 1hr far away from the clinic put the impression in a plastic bag with humid cotton . if the lab was very far away use another material )

\*we take the impression with perforated boxed plastic tray ( don’t forget to apply the adhesive )

**\*Secondly** , After taking the impression we do the diagnostic cast , its made of type 3 or 4 stone ( usually type 3 ) . we need this study cast for these reasons :

- to put the treatment plan

- to do initial surveying on it

- record for the patient

- to present it to the patient

- for designing the RPD

- for communication with the technician

\*Thirdly , we do surveying >> its marking the most bulbous part of the tooth and the soft tissue before designing an RPD

- dental surveyor : device used to determine the parallesim of the teeth surfaces and the undercut in relation to a common path of insertion and displacement of the denture

- the components of the surveyor : base , vertical arm , horizontal arm , mandrel , accessories ( analyzing rod , carbon marker , wax trimmer, undercut guage )



* Surveying line : it’s the hieght of contour of the tooth which there will be an undercut beneath it ( be careful when you do surveying you must touch the soft tissue , otherwise the surveying will be wrong )
* The undercut : it’s the part that locates between the survey line and the gingiva. Could be a true or false undercut (( the false undercut will happen when we tilt the cast so the occlusal plane wont be parallel with the table ))
* So if we tilt the cast the common path of displacement wouldnt be perpendicular with the occlusal plane and thus we will get a false undercut, **UNLESS** we tilt the cast and had a new survey line bellow the previous one
* Also there is tooth undercut and soft tissue undercut .
* The common path on insertion : shouldn’t be the same of the path of displacement . There is only one case that the path of insertion is the same of displacement >> when the cast at the zero tilt
* The path of displacement should be **always** perpendicular to the occlusal plane
* The main objective of surveying : defining the undercuts in order to block them , because if they aren’t blocked the RPD wont set properly .

GOOD LUCK :D