**Sheet no. : 13**

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We will continue talking about our topic “ post delivery complains “ and how to diagnose and manage them.

Last time we went through the first point which is “ pain and discomfort “ and down the list we have several points that were discussed previously. Today we will continue from the occlusal problems.

\_ The Occlusal faults/problems could be : 1.Wrong antero-posterior relationship.

 2.Uneven pressure.

 3. Excessive vertical dimension.

 4.Insufficient vertical dimension.

 5. Cuspal interference.

 **- Cuspal interference:**

How would cuspal interference cause pain?

Upon cuspal interference : The dragging action of the teeth against each other can cause the denture to drag against the mucosa. this will be manifested as pain on retentive denture or instability on the loose one, so if the denture was retentive with good peripheral seal, this will be translated as pain on the mucosa but if the denture doesn’t have enough seal or retention, this cuspal interference will be translated as dislodgement. Here, the patient comes complaing of both pain and loss of retention.

* So one of the DDx when the patient comes with unretentive denture is occlusal faults.

- The pain manifested as sore areas on the buccal or lingual surfaces of ridges.

-**Treatment:**

If Slight: chair side grinding or clinical remount.

If Gross: new dentures with balanced occlusion.

\_ The **second** cause of pain is : teeth being of the ridge ( way too buccal to the ridge ), but why this happens ?

We are trying to put our pt in class 1 occlusion regardless their original occlusal relationship. This problem usually happens when the setting is done by the technian who doesn’t know what class 1 or 2 or 3 means, he only knows one way of teeth placement.

For ex; a pt with class 3 has a small maxilla compared to the mandible so upon making our setup in class 1 then the upper teeth will be placed way out of the ridge buccally and upon functioning/eating, the upper denture will tilt and dig in the peripheries into the mucosa on the working side while on the balancing side it will pull the denture away to end up with a dragging effect against the tubrosity of the maxilla.

In this situation, the pt comes complainig of pain in the sulcus on one side posteriorly and at the tubrosity on the other side which is the balancing side so this must draw your attention that the setting was done in a wrong way ( out of the ridge )

**- Treatment:**

 • Remove last four molar teeth and reduce the bulk of acrylic over the tuberosities to give more tongue space posteriorly to control upper denture. (temporary solution to relieve pain )

 • New dentures with above faults corrected. ( definite treatment ).

**\*\* So if your pt is class 3 skeletal relationship, do your setting class 3 relationship**

* The **third** cause of pain is: Retained root or unerupted tooth \_that was not recognized before the denture placement\_ .

This complain could be immediate which means we didn’t notice the presence of an impacted tooth that is very close to the gum and upon putting the denture directly it will pressurize on the soft tissue causing pain.

Or it could be a delayed complain which means with time the ridge will be resorbed making this remaing piece of root close to the crest of the ridge causing pain for the pt.

* You have to have a radiograph to make sure of what is going on.

**-Treatment** ( depending on the severity of the case ) :

• Extraction of the root or tooth, followed by relining of the denture in that site.

 • Or easing the fitting surface over it if extraction is not indicated ( only relief the denture ).

* The **forth** cause of pain is: Narrow resorbed ridge

This usually happens with the lower ridge which is already thin and upon resorption it becomes thinner and upon denture placement, it will press against the crest of the ridge and the pt will be in pain that can also be accompanied by burning sensation. The pt has the worst feeling after eating since they place most pressure on those areas.

**-Treatment**: ( we usually start with simple management before jumping to surgeries)

* simply: relief over the sharp irregular ridge.
* If the complain continues then we do Alveolectomy to smoothen the sharp areas of the crest of the ridge followed by either relining the denture or making a new one.
* The **fifth** cause of pain is: Mental foramen

Normally it is situated below the alveolar ridge. With resorption, it becomes over the crest of ridge and Pressure from denture may elicit localized or referred pain.

This pain characterizes by being electric pain ( burning sensation ) because it is nerve related.

**-Treatment:**

 • Relief the denture at the mental foramen in order not to cause any pressure but in advanced cases relief alone might not give us the desired results so we do surgical procedure for nerve tarnspositiong into a more apical position which is very aggressive procedure that we try to avoid.

* The **sixth** cause of pain is: Irregular resorption

It happens as a result of different time of extraction so we end up with resorption in one area of the ridge more than other areas. This can cause pain over the area of interference.

Pain will be elicited when the intervening mucosa is pressurized ( intervening mucosa: the areas that are less resorbed ).

Similar to the pain due to narrow resorbed ridge, where the pt comes complaing that the pain is getting worse after eating or functioning but the pain is localized.

**-Treatment:**

* At the beginning : just relieve the denture and if it doesn’t work ;

 • Surgical smoothing of the affected irregular area followed by relining the denture.

\_ The **seventh** cause of pain is: Rough contact or fitting surface

Before insertion, you should palpate your denture, if any rough areas are presented you should relieve them.

So if you did your job well, this complain shouldn’t be there at all, however if small pimples or blebs of acrylic over the fitting surface are presented then relieve them with an acrylic bur.

\_ The **eighth** cause of pain is: Swallowing and sore throat

If the pt complains of difficulty in swallowing - he can’t swallow –and whenever he wears the denture, he feels as if he got tonsillitis, in such situation we have to think that the denture might be over-extended in **certain** areas.

* For the upper denture: it could be extended over the soft palate or pressing over either the hamular notch or the postdam region, this can cause difficulty in swallowing and the feeling of having tonsillitis.
* For the lower denture: if it is over-extended in the lingual pouch distally, again it can give them such feeling.

-There will be an area of slight redness or ulceration.

In addition to that feeling, the pt also complains of having unretentive denture since it extends beyond the postdam area so everytime he talks, the soft palate moves and the seal will be broken and the denture will fall down.

**- Treatment**:

• Reduction of the over-extension.

\_ The **last** cause of pain is: Undercuts

Most probably in the upper denture the undercuts are located posteriorly at the maxillary tubrosity area and it could be uni/bi lateral.

Depending on how severe is the undercut; we can either relieve the denture around it or go for alveolplastic surgery and reconstruct the denture.

So it the undercut was mild, we only relief the denture at this area then teach the pt how to insert it.

The best method of insertion of a denture in the presence of undercuts is rotational way ( the pt inserts it at one side then rotates it to the opposite side ), this can be painless however if the complain continues, then we have to go for alveoloplasty/alveolectomy followed by reconstruction of a new buccal or lingual flange ( no need to make a new one ).

**\*\* To this point we end up with the first complain –pain and discomfort- that the pt comes for and its causes.**

**Remember:**

**Categories of Complete Denture Complaints:**

 Pain and discomfort.

Appearance.

 Inability to eat.

 Lack of retention and instability.

 Clicking of teeth.

 Nausea.

 Inability to tolerate dentures.

 Altered speech.

 Biting the cheek and tongue.

Food under the denture.

 Inability to keep denture clean.

 **- Appearance:**

The main cause of such complain is that the pt was not given enough time to evaluate the appearance of the denture at the time of appointment or it might be due to the pt being indifferent or hysterical type of pt.

That’s why in try-in visit the pt should evaluate the appearance of the denture and take the decision then signed a consent for his acceptance before the time of insertion.

Final esthetics can be assessed only 4-6 weeks after the insertion of the denture due to adaptation of lips and muscles since most of the pts feel tension on the dental chair plus we have to give some time for the muscles to adapt to such a foreign body. So at the beginning, we reassure the pt for the appearance of the denture and tells him that the appearance will be re-evaluated 4-6 weeks later and if there is sth abnormal, then we can go through a list of possible causes and try to fix it.

Appearance complains might be due to:

1. **Facial appearance:**
* May complain: his nose and chin are prominent or are approximating -the pt is still collapsed with denture in place-. This is due to failure to restore the OVD correctly (not enough) . Or if the complaint is delayed, it will be due to alveolar resorption.
* May complain: that the lips and cheeks are falling in. This is because teeth have been set too far lingually or deficient support/ having insufficient width to the buccal and labial flanges that was taken during border molding step and through the adaptation of the wax rims.
1. **Dissatisfaction with teeth:**

Could be due to :

• Colour

 • Shape

 • Position

* **Colour :**
* As we realize that most of our pts want to have a bright white teeth regardless their age and they usually complain that their teeth are too dark or too yellow. The dentist should explain that the colour of the teeth gets darker and yellower with age and if we put white ones then it will look fake.

**-Treatment:**

if there was a mistake in the choice of the shade then Change the colour to another colour that you both finally agreed to. If you think the wanted colour will look absurd, delay treatment or refer to colleague to convince him more.

* Once again, you can avoid all these problems if you have your pt consent from the beginning.
* **Shape :**
* Complaint : “ They don’t look right”.

**-Treatment:**

if you didn’t get your pt consent from the beginning then you have to remove the teeth and do a new setup with different size and shape until he is happy with what he has and then redo that part of the denture.

* **Postion :**
* Complaint 1: “ Teeth too far back” or “too far forward”.

 This problem can be avoided during the bite registration or try in stage. So upon evaluating the phontics, if there is sth abnormal then it is related to teeth position.

 Reason: the setting has been left to the technician who sets the teeth onto the crest of ridge (but remember there is upper labial resorption, making the teeth too far lingually).

* Complaint 2: “Teeth too low and show too much”.

 Again this is due to a problem that was missed during the bite registration or try in stage.

**-Treatment**:

Anterior teeth may be removed then fix the position and reline that part or better by remaking a new denture.

 **\_ Inability to eat:**

The pt comes complaing of inability to eat. There is a list of problems that might cause it.

* This most probably happens with new denture wearer. So if your pt is a new denture wearer and before considering fixing any problem, you have to reassure him and tell him that this is sth normal with a new denture and instruct him to eat small bites, soft food and try to eat on both sides to stabilize the denture then see what happens with time.
* Also remember that Certain food stuffs are more difficult to consume: so don’t expect your pt to eat hard food from the beginning because they need to get used to the denture first.
* Cusp teeth vs low-cusp or zero-cusp teeth: a denture with zero cusp teeth we don’t expect from the pt to be able to chew everything. The more prominent the cusps are, the more efficient they are upon eating.
* Lack of interdigitation of posterior teeth and Unbalanced occlusion: are occlusal related problems that cause inability to eat and can be fixed by chairside or clinical remount and if severe then remake the denture.
* Locked occlusion (plane line articulator): this usually happens when we use hinge type articulator since it is only capable of doing single movement which is opening and closing and is not capable of doing lateral movement. So any denture that is fabricated on a plane line articulator will results in locked occlusion since the pt is not capable of doing lateral movement or even chewing probably.
* Restricted tongue space: can be due to either the teeth setup is too lingually or the borders of the flanges of the lower denture are too thick.

\_ If the teeth setup is too lingually then we have no choice except reset the teeth.

\_ If the borders of the flanges of the lower denture are too thick then reduce the thickness, polish the denture and see what happens.

* Over-extension of periphery: we have already talked about it in the swallowing problems and the feeling of sore throat, for the upper denture it might be extended over the soft palate and for the lower denture it might be extended over the lingual pouch distally causing the pt inability to eat.
* Habit of eating on anterior teeth only: this is because the pt loses his posterior teeth first and starts to use the anterior ones for eating and functioning and upon wearing the denture, it will take time from him to accommodate back for using the posterior ones. Now for a denture wearer if he uses his anterior teeth for eating and if we don’t have balance, this tend to dislodge the denture from its place causing him the inability to eat.

**\_ Lack of retention and instability:**

If everything was done perfectly then remember that one of the simplest thing that can cause loss of retention and instability is to forget opening one of the freni so always make sure that all freni are opened properly and are relieved.

Other causes : could be either during normal function or upon coughing and sneezing.

* When mouth is opened : the pt might complain that his denture is not retentive or stable during normal function ( talking, eating or simple mouth opening )and this can be associated with many causes :

 – Low (or defensive) tongue position : the most important thing in the stability of the lower denture is the presence of the tongue so if the tongue is defensive or retracted then we have to inform the pt immediately not to expect a retentive denture for the lower in order not to think that you deceived him and made a bad one and in such case the pt either use adhesive or try to change this habit.

– Over-extension: if it was slight then it will affect the retention, if severe then it can cause pain also.

This problem can be fixed by using PIP, see where the extended borders are and try to fix them.

– Tight lips: some pts have tight lips and hyperactive mentalis muscle that tends to dislodge the lower denture , this also should be noticed during examination.

– Restricted tongue space: Trim lingual cusps altogether.

– Under-extension and lack of peripheral seal: very common cause for loss of retention and instability, check by adding tracing compound, then reline.

 – Lack of saliva: most of our pts are elderly, they take many drugs that can cause xerostomia. This also should be known from their medical history during examination. The pt should be informed that even if everything was done perfectly, the lacking of saliva has a huge effect on compromising the stability and retention of the denture and he should be instructed to use artificial saliva.

* When coughing or sneezing: coughing or sneezing causes the soft palate to move vigoursly breaking the seal causing the denture to dislodge from its place and there is no way to overcome such a problem so the pt should be able to live with such a problem.
* **Clicking of teeth:**

• Excessive vertical dimension: it is the first thing that you have to think about when the pt comes complaing of clicking teeth. It is due to the lack of FWS that allow teeth to move freely upon talking or swallowing resulting in premature contact between them followed by clattering or clicking.

 • Movement of lower denture.

• Cuspal interference and lack of balanced occlusion.

• Excessive incisal guidance angle and low overjet : here we have no proper balanced occlusion and the anterior teeth meet prematurely while the posterior teeth are separated. This can cause clicking.

. • Porcelain teeth: nowadays we don’t use porcelain teeth anymore .

* **Nausea:**
* Upper denture slightly over-extended on the soft palate: this can cause the pt to gag and it can be managed by removing the overextension and readapt the post dam. This usually happens when we incorrectly mark the postdam area.
* Denture under-extended: if the denture is under extended then definitely it is unretentive causing slight movement against the soft mucosa giving the feeling of gag reflex.
* Thick posterior border: this can irritate the dorsum of the tongue which is full of receptors that are responsible for the feeling of gag reflex since it is supplied by both the vagus and glossopharyngeal nerves.
* Protrusive imbalance: this will cause upper denture to dislodge posteriorly and causing the feeling of nausea or gag reflex.
* **Inability to tolerate dentures:**

The pt has no specific complain but he comes telling you of the inability to tolerate the denture. Again it is not because the pt is nagging or he is crazy but it is due to one of these problems:

* Cramped tongue space: the ridges are resorbed with failure to set the teeth in neutral zone ( the teeth are placed too lingually ).
* Altered vertical height: a pt with an old denture with FWS=15mm and when we construct the new one the FWS=2 mm then we will have a huge difference in the vertical dimension that can’t be tolerated by the pt. So, the change in the vertical dimension should be always gradual.
* Altered occlusal plane: if you don’t put the occlusal plane in its correct position then the denture will not be tolerated by the pt since it will interfere with the tongue.
* Unemployed ridge: difficult to wear lower denture.
* Changes in shape: unless the patient can accept the change in shape after some time, remake preferably with the copy denture technique ( duplication ). ( which means a pt with an old denture upon wearing the new one he might not be able to tolerate it because of the change in the shape so we give him some time to accommodate the new one and if not we go for the copy denture technique)

**\_ Altered speech:**

such complain is a matter of time and most probably it will be solved when the pt accommodates his new denture.

But also check the position of the anterior teeth it could be placed too far backward or forward and causes this interference.

**-Treatment:**

reassure the pt , can be enhanced by exercise, otherwise remake.

**\_ Biting the cheek and tongue:**

• Cheek biting:

1– Insufficient buccal overjet: as we all know that the upper teeth are positioned buccally to the lower teeth so if your setup was done edge to edge for example then this problem will rise.

**-Treatment**:

 we solve this problem by recreating the OJ. It depends on the case for ex. If the pt was class 1 relationship then we reduce the buccal surfaces of the **lower** buccal cusps but if your pt was class 3 relationship ( which means we have to do our setup in crossbite relation but we place them edge to edge ) then we reduce the buccal surfaces of the **upper** buccal cusps.

2 – Reduced vertical height: remake at the proper VDO.

• Biting the tongue: due to decreased tongue space or decreased VDO.

**\_ Food under the denture:**

This is due to the lack of peripheral seal of the lower denture. This can be treated by maximum lower denture coverage with maximum peripheral seal.

\_ regarding to the lower denture, you have to tell your pt that sometimes he must be able to accept the presence of food underneath his denture especially if the ridge is highly resorbed.

**\_ Inability to keep denture clean:**

 • Inadequate finishing of denture especially interdentally: after doing flasking, the denture should be finished and polished prior insertion otherwise the presence of any rough areas will collect plaque, stains, calculus and interfere with the cleaning process. The pt should be instructed to brush his denture as much as he can.

• Use of hard abrasives: we have already said that we shouldn’t use any abrasive materials during the cleaning process since it will cause rough areas.

• Failure to clean dentures regularly: you can notice this with many CD pts. You should remember why are these pt in the edentulous state? To start with because they didn’t take care of their natural teeth so don’t expect from them to take care of their dentures. Try to educate your pts as much as you can.

• Incorrect use of denture cleansers: we already said that for example if we immerse the denture for a long time this can cause corrosion that will interfere with the cleaning process.

• Reduced manual dexterity of the elderly (or ill) patient: those pts might not be able to clean their dentures.

 **“GOODLUCK EVERYONE”.**