

# **Management of gagging reflex during impression making and after complete denture insertion**

Gag reflex : tendency for vomiting during impression making either a primary or master impression and during examination .

It's a Protective reflex form in all individual and vary from one to another ( some of them very severe Or severe,mild,moderate,v.v.little)

To overcome this phenomena:

\*when the dentist go to trigger area the patient will start gagging or after the denture insertion. That is why we need to rehabilitate our patient & to use the impression in good manner .

\*the reflex is trigger by stimulus in the region of the soft palate at the junction between the hard and soft palate so examine that area during examination by bring the mirror and pass it in the junction between hard and soft palate and if the patient have tendency to vomiting so this is a gag reflex patient and you have to be aware of this.

\*in some sever cases if you only put the mirror in his lip ,the patient start vomiting .or if you put it in the dorsum of the tongue especially posterior third the impulse transmitted from trigeminal to glossopharyngeal nerve and then to medulla in the brain and followed by real vomiting .

\*some patient have sever fear; only if you put some foreign body in his mouth like stock tray or alginate or compound he want to vomiting because he fear of choking ,then the reflex happen to the patient

\*some patient start to vomit from his excessive flow of salivation or from saliva ejector (some time when you do restoration to patient the saliva is increased due to panic) .

The mechanism of action: By that time the glottis start closing and the patient stop breathing, then saliva flow increased and finally the pharyngeal muscles contract eventually retching start

#### General causes

1) psychological factor :due to fear that the patient may choke from the impression material like :over extended posteriorly so you took the impression of tonsils

2) overextension of the upper denture too far to the soft palate that's happen when you give patient the complete denture and he is still have gag reflex.

Because you reach the post dam too far to soft palate then the patient is vomiting because the denture reach to trigger zone between the movable and non movable zone then when the patient talk the muscle of soft palate goes up and down then the air enter and denture goes down then the denture hits the dorsum of the tongue and the patient is choking of the denture that is why you should be careful not to extended beyond the post dam area .

3) Overextension of the lower denture in the lingual pouch beyond the mylohyoid ridge then the patient will not tolerate that and he start vomiting

4) Narrow tongue space (cramped tongue):if you set the lower teeth not in the neutral zone that the posterior teeth will set too lingually then the space for the tongue will be limited .

5) Thick and rough posterior border of the maxillary denture; which may cause mechanical irritation to the dorsum of the tongue

7)upper denture is under extended too far :so the denture is in the hard palate and not have a seal so if the patient open his mouth to speak ,the

atmospheric pressure is work reverse so the denture will falls in the dorsum of the tongue and doing irritation and gagging reflex.

\*lack of retention :Denture without post dam , it prevent the mucous secretion during function to flow to hard palate because when the patient doing a function when he wear a denture the secretion from minor salivary gland is increased but the post dam inhibit it to go to the hard palate so it provide retention

8) imbalance occlusion: RCP is wrong and the denture is moving so the movement of the denture from side to side and goes down so that will annoys the tongue so the patient have tendencety to vomiting

9) Retching after long time of using the complete denture ;if the patient wear the denture for 10 year then come to you and told you that always if he wear the denture he will have tendency to vomit; that occurs because resorption to bone so the vertical dimension will change and over closure and the free way space will increase so the tooth will erosion so the distance between origin and insertion of the muscle of mastication be near then the patient have tendency to vomit then the dentist should change the denture in proper free way space and return to normal denture .

Classification of the patient:

1)very severe :fear to go to the dental treatment

(بس تجيبه سيرة دكتور الاسنان بسير بده يستفرغ لأنه بيتزكر كل شي بصير

عنده )

That's hapeen due to bad experience from his parents

2) Severe: tend to retch at the beginning of examination ;if you put the mirror in her lip , he start vomiting.

3) Difficult : Difficult patients “apprehensive “ retching may take place even in the most careful clinical technique –simple extraction ; this patient is fear from choking.

4) Problem patients : unable to wear the denture for minute or hours and this may due to psychological factor or faults in the denture So you have to examine the retention and extension of the denture & correct it because no patient complain from nothing .

**Mangement of this phenomina during making an impression:**  
it is your responcebility to communicate with patient

1) The dentist have to be confidence to overcome such problem .

2) Assure the patient that this is a normal phenomena in all people but vary from one to another

3) Seat the patient in upright position with his/her head slightly forwards and instruct them to breathe through their nose not mouth because the dentist put the impression in the patient mouth so if the patient breath from his mouth so the patient will choking.

4) some technician tend to spray the local anesthesia or ethyl chloride at the sensitive areas but it is not sense to anesthesia every patient need to do complete denture but in some cases when it is very severe ; only if he open his mouth he start gagging so you can give him an general anesthesia

5) Other try to mix the impression material with local anesthesia ,some research try to mix special alginate with local anesthesia .

6) Try to take the lower impression before the lower impression

7) Try to use slow flow impression material as impression (1 compound, heavy body silicone. but don` t use alginate a lot

of patient fear from it so don't use it in such patient (it's very flowy).

\*You can use silicon in very severe cases

8) Behavioral therapy: (Hypnosis)

\*But if the patient can tolerate the traditional techniques don't use this technique

\*Hypnosis doesn't work if the language of the hypnotic is not the same Language of the patient

9) Try to occupy the patient mind through the impression processors like told him to count from 1\_10 or put the left leg in the right one and so on until you finish the impression processor so you concern his brain from processor

10) Drug therapy:

1) Barbiturates antidepressant :to depress the central nervous system .

2) Anti-histamine to reduce the feeling of sickness.

3) Atropine: to reduce the saliva flow.

But it is not a common processor

### **Management After denture delivery or before :**

1) Brush technique:

patient should be encouraged to touch their palate with the toothbrush as back as possible without causing gagging ;Bring toothbrush on hard palate beyond the central incisor and breath then take it out then re-enter it in the same place or near it for 2 week .When the patient came after 2 week he is can tolerate complete denture now but that should be continuous in the same minute not intermittent .The patient should write a charting like that he remain in that region 2 second and the near it more time but when he came to you next time ever thing will be good.(it's very effective way and succeed in 80% of the cases).

2) Base plate acrylic technique: By constructing a retentive base without teeth and to be used for at least two weeks. -----> Do an impression and pouring it then do a retentive base made of self cure to the full depth and give it to patient (the base without tooth) and ask him to put it in his mouth and take it out then re-enter it like a brush technique for 2 week .

3) palatless denture: in order not to cover the crucial area ,food post – dam around the periphery or micro-value can be (that the denture will be in soft and hard palate and a step between the hard and soft palate like a foot step in order to prevent the entrance of the food and air)

\*in the past they do like a valve in the canine area to suction air and negative pressure that help to retaining. That do in horseshow denture because its compromised the retention so we do a valve in it.

\*For new denture wearer you should to see the patient in 24 hours & explain to him when the attack come and how to overcome such problem & advice him to wear it when he sleep for 2 to 3 days until he accept it .

\* Advise should be given to the patient to listen to music when ever feel the attacks.

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