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# Title: Bonadex Dentistas

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In almost all of my 52 years of dental practice I believed that parafunction was present in the background of most oral pathology.
Now approaching the end of my professional course.
I can firmly say that this is true.

# ¿What is parafunction?

**It's not easy to define, in most of the medical dictionaries the term does not exist.**

**It is a muscular disorder, from neural origin, it is repetitive, unconscious and without utilitarian sense.**

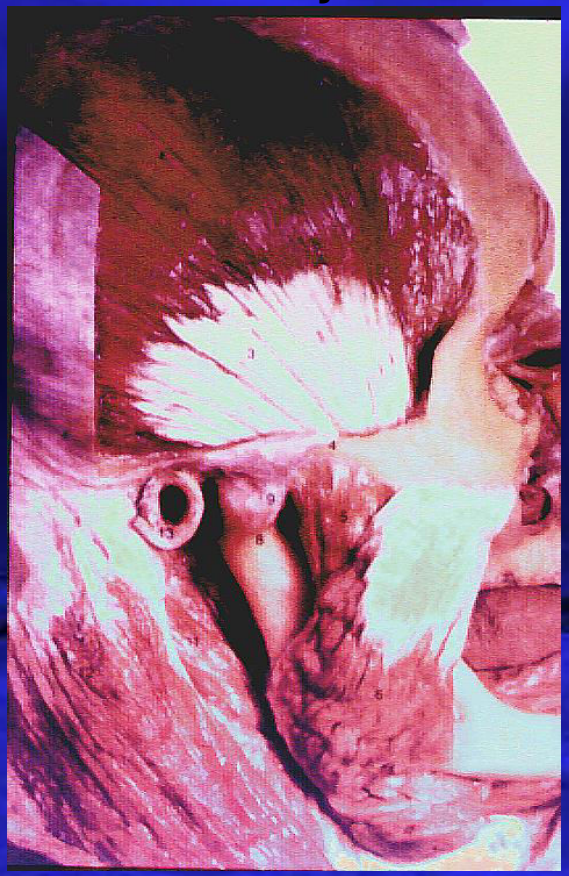
**In the mouth. Mainly there are two types of parafunctions:**

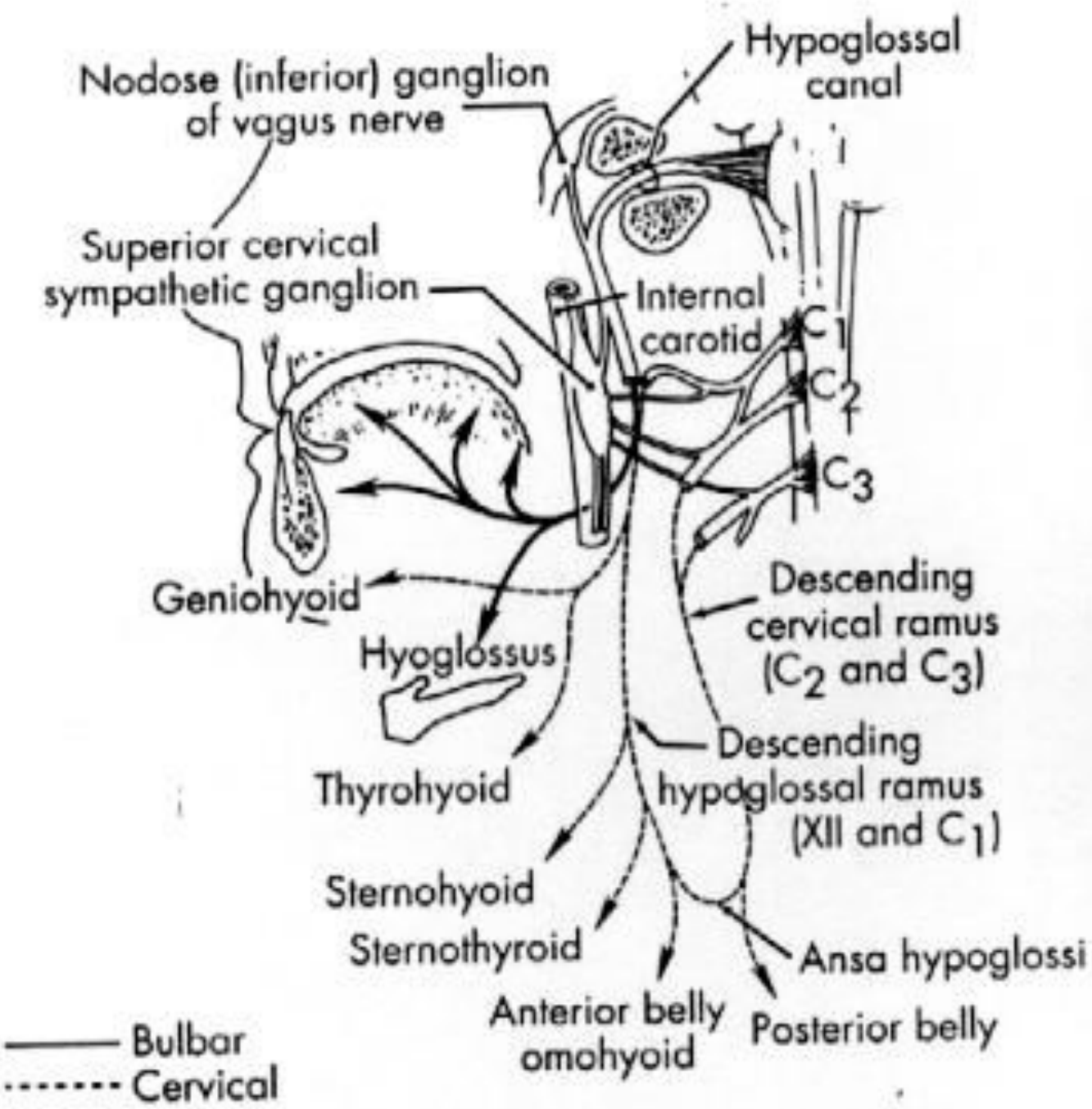
**The ones related to chewing.**
**The ones related to deglutition.**

**The first related to the stress and anxiety.**
**The second probably related to the "memes" ( parcels of neuromuscular information transmitted like "genes" or by cultural imitation).**

(Memes, a term used in neurosciences)

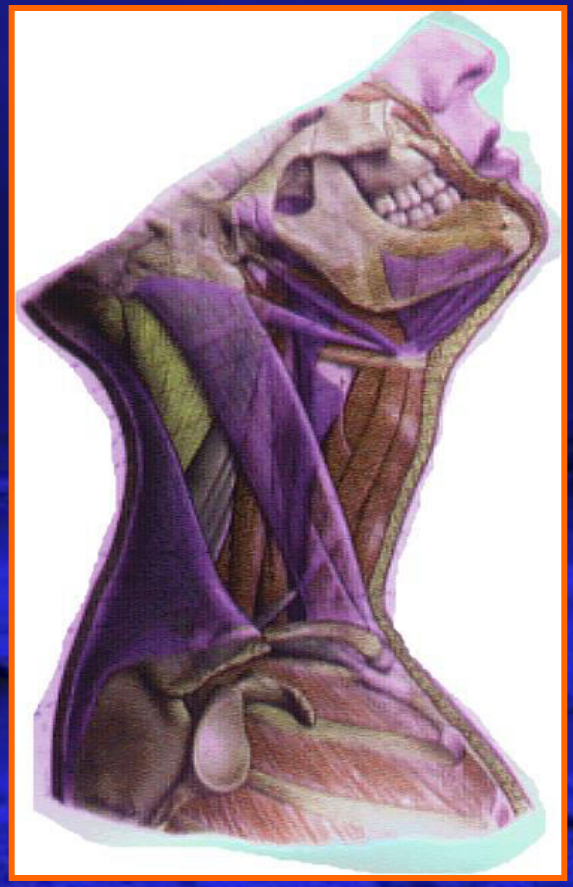
**The two are expressed by mussels and conducted by the nervous system**

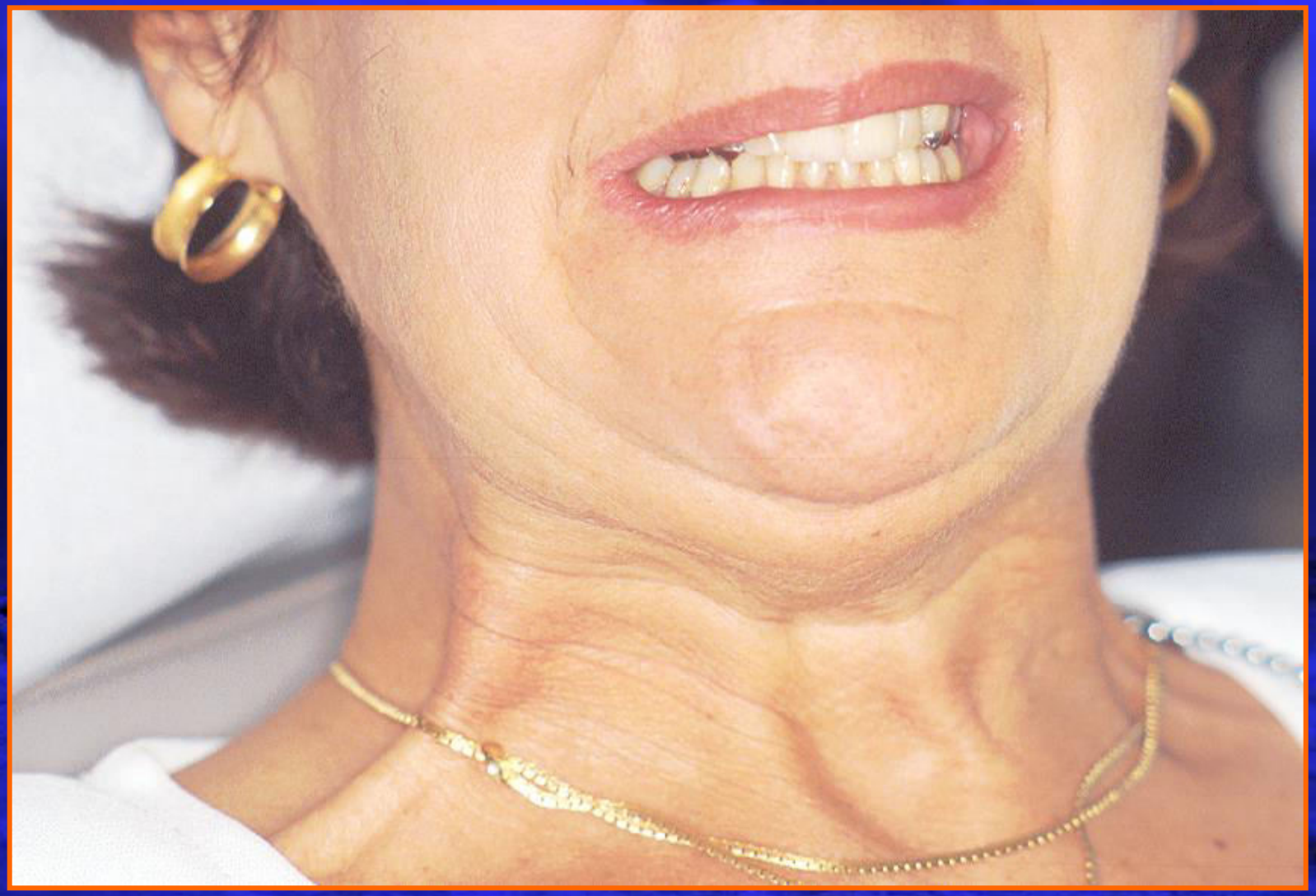



Hypoglossal canal
Nodose (inferior) ganglion of vagus nerve
Superior cervical sympathetic ganglion
Internal carotid
C1
C2
C3
Geniohyoid
Hyoglossus
Descending cervical ramus (C2 and C3)
Thyrohyoid
Descending hypoglossal ramus (XII and C1)
Sternohyoid
Sternothyroid
Ansa hypoglossi
Anterior belly omohyoid
Posterior belly
Bulbar
Cervical

## Dentist frequently do not pay sufficient attention to opener muscles

- Digastric m.
- Estilohioideus & Genihioideus m.
- Milohioideus m.
- Hioglosus m.
- A very special three: Estiloglosus, Estilofaringeus and Estilohioideus m.
- Omohioideus m.
- Sterno  tiroideus m.
- Tirohioideus m
- Sterno hioideus m.





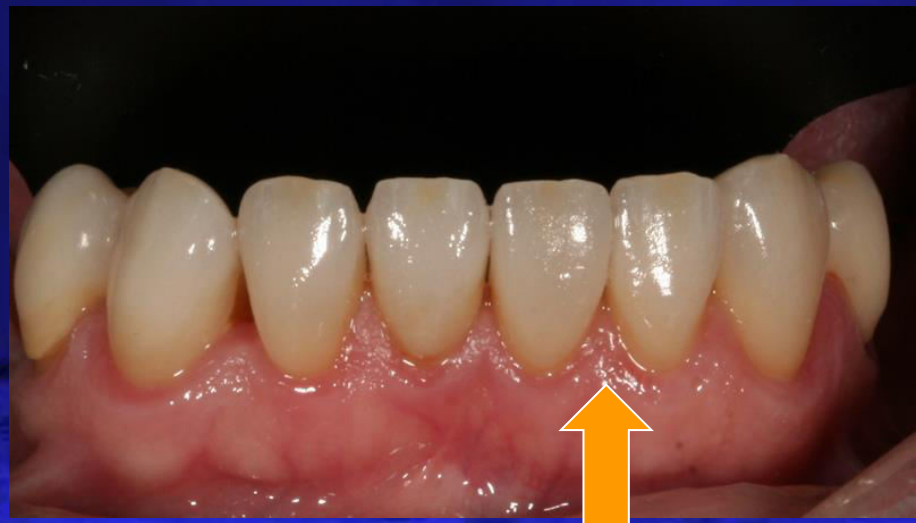
**Lack of coordination** : simultaneous contraction of agonistic and antagonistic muscles.

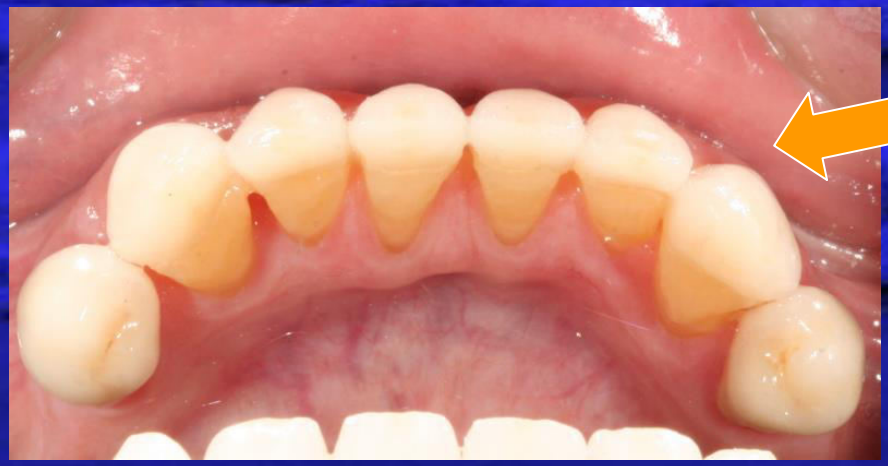
# The parafunctional profile

- Injury of the hard tissues of teeth and/or alveolar bone.
- Thickness of the mandible angle.
- Elongated stylohid processes.
- Enlarged maxillary sinuses.

# Abrasion

**wear and tear by mechanical rubbing**
**is it parafonction? Definitely yes**





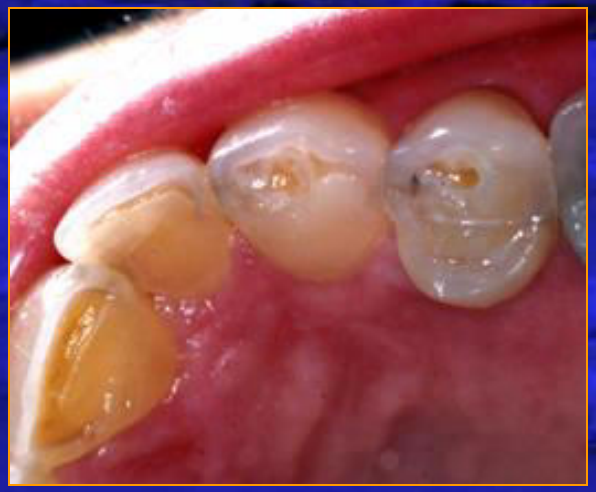
Undisturbed

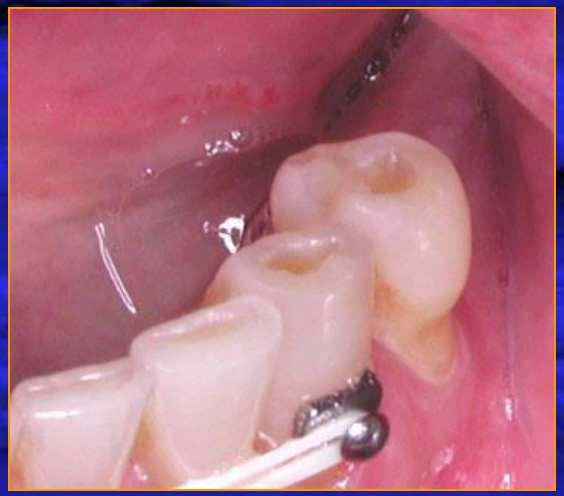
Treated by porcelain
Veneers

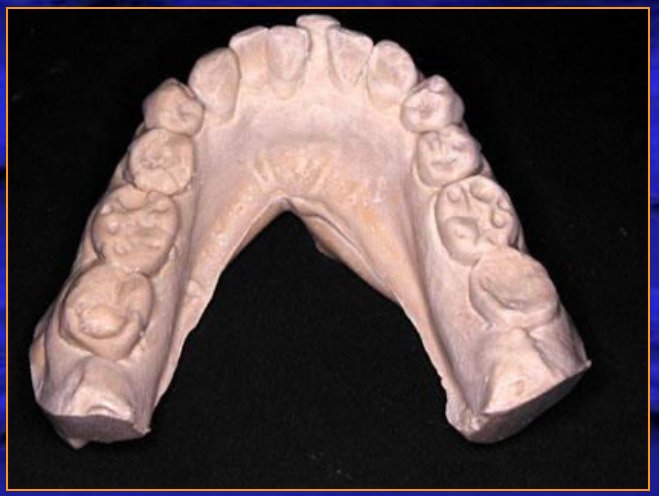
# Erosion

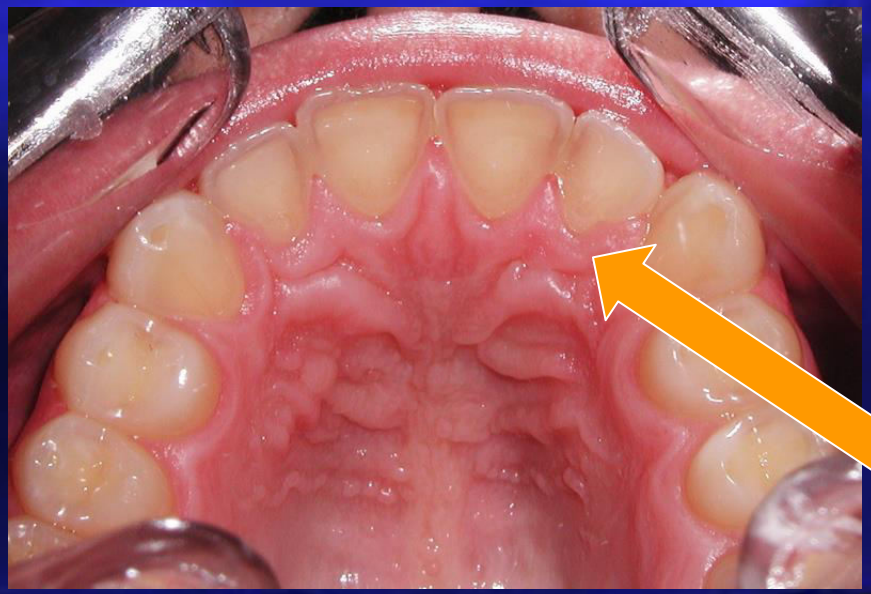
Low salivary Ph. There are dissolution injuries.
Causes: intake of citrics, carbonic beverages.
Esofagal regurgitations

Are these parafonctions? Probably not, but in some cases mixed origins could exist





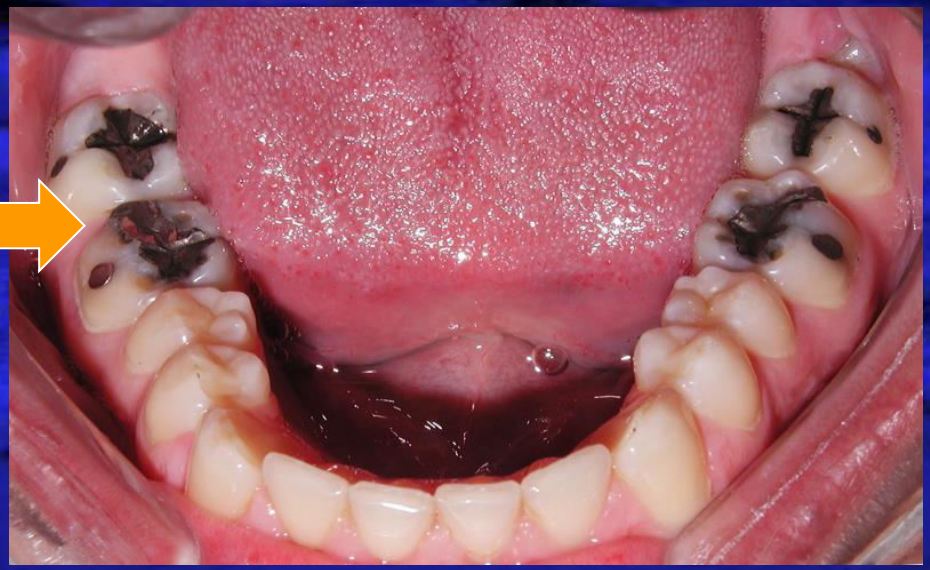




**Erosions suggesting esophagal regurgitations.**
**Possibly caused by bulimia (continuous and self -provoked vomiting).**

**Lingual aspect of anterior teeth**

**Rounded cusp**
**And incissal edges**

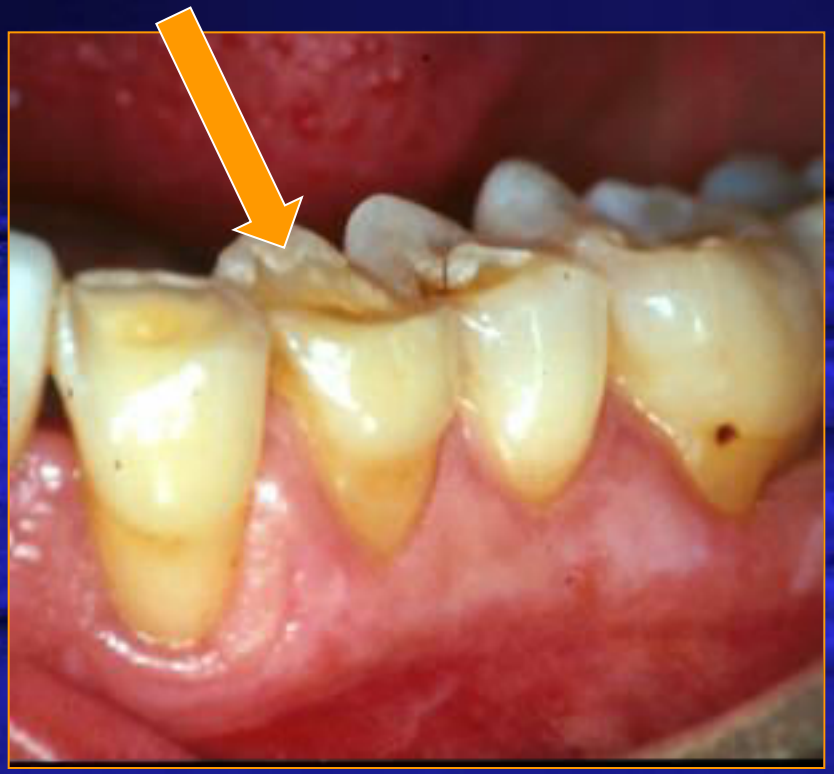


# Abfractions:

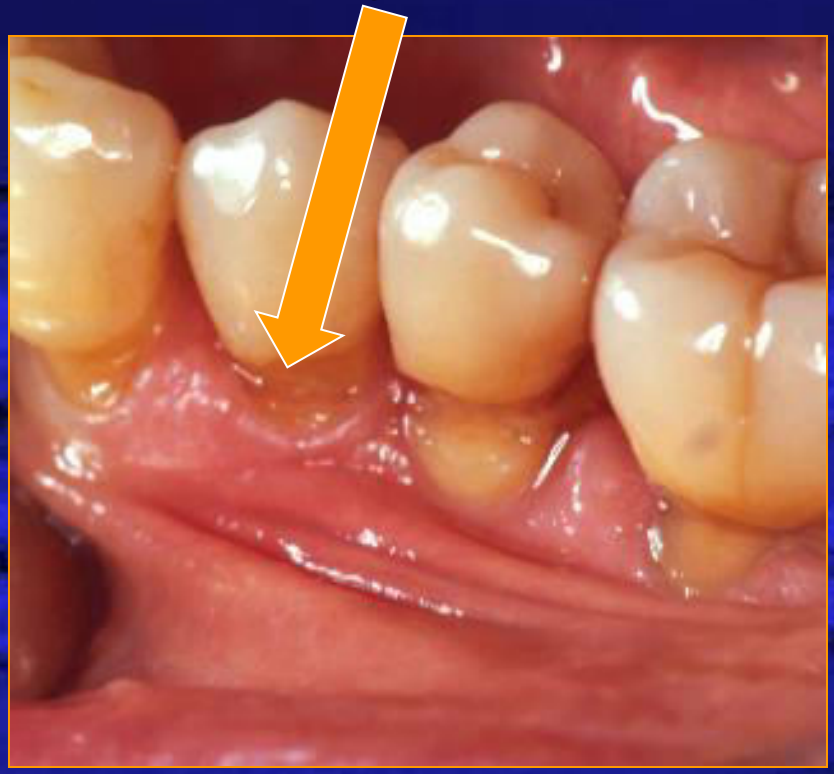
**Lost of dental estructure in the collar of the tooth**

**Are these pictures images of parafunction? Probably yes but of different origin**

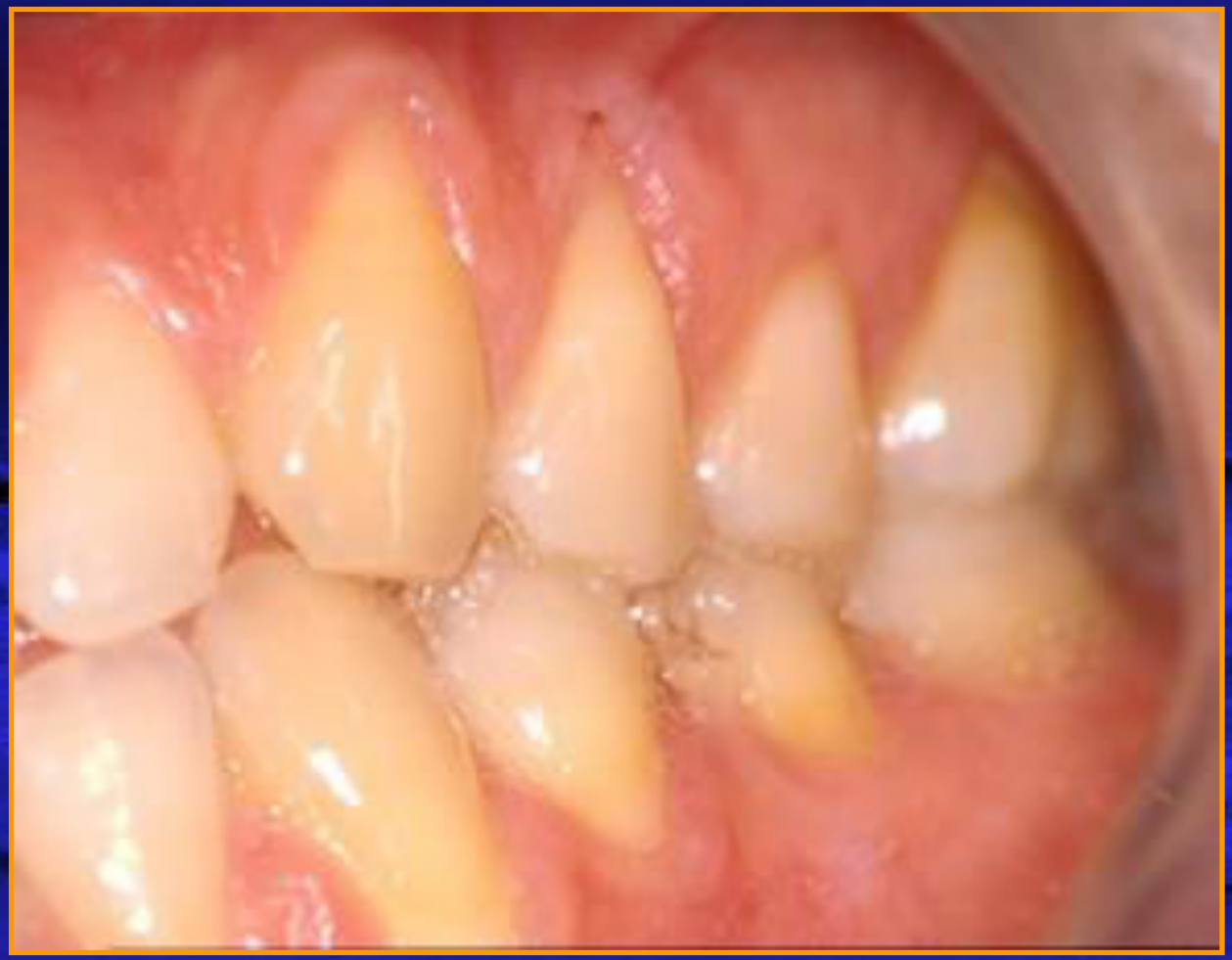
Coincide with bruxism



Coincide with tonge thrust



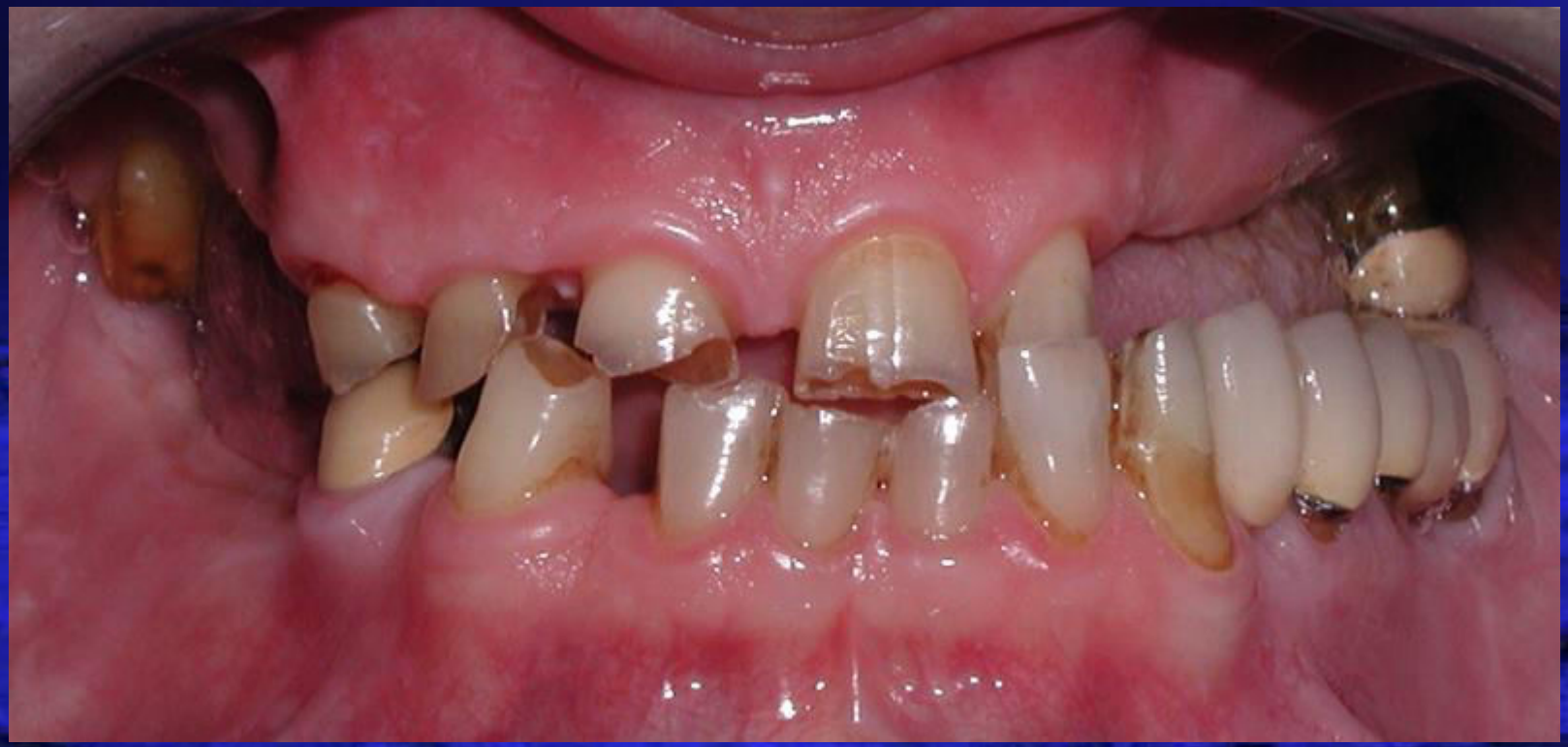
**Do not mix up abfractions whith dehiscencies, in these there is not a lost of dental structures**



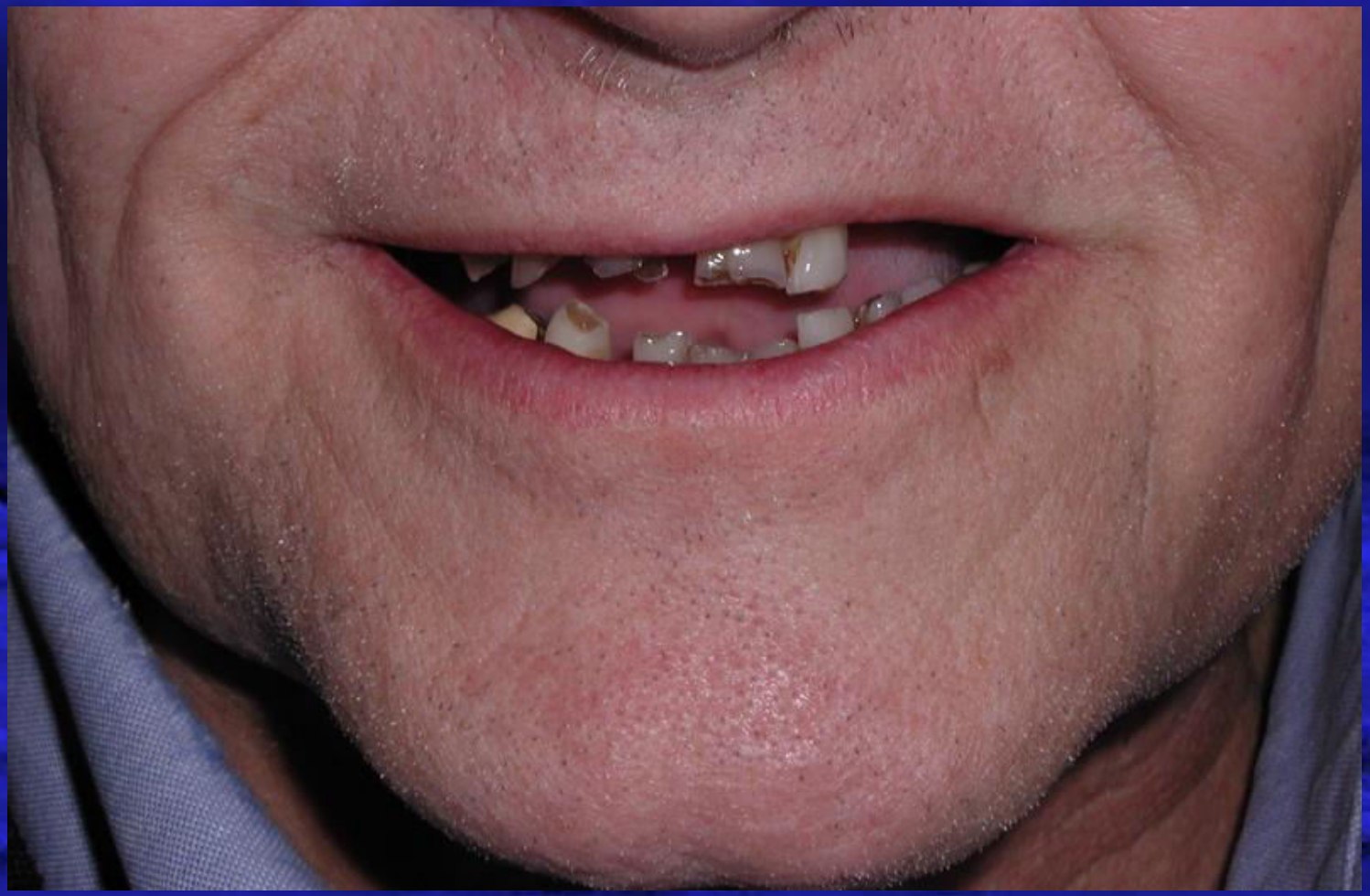
**Is it due to parafunction? Probably yes but of the tongue**

# Tony is a happy man

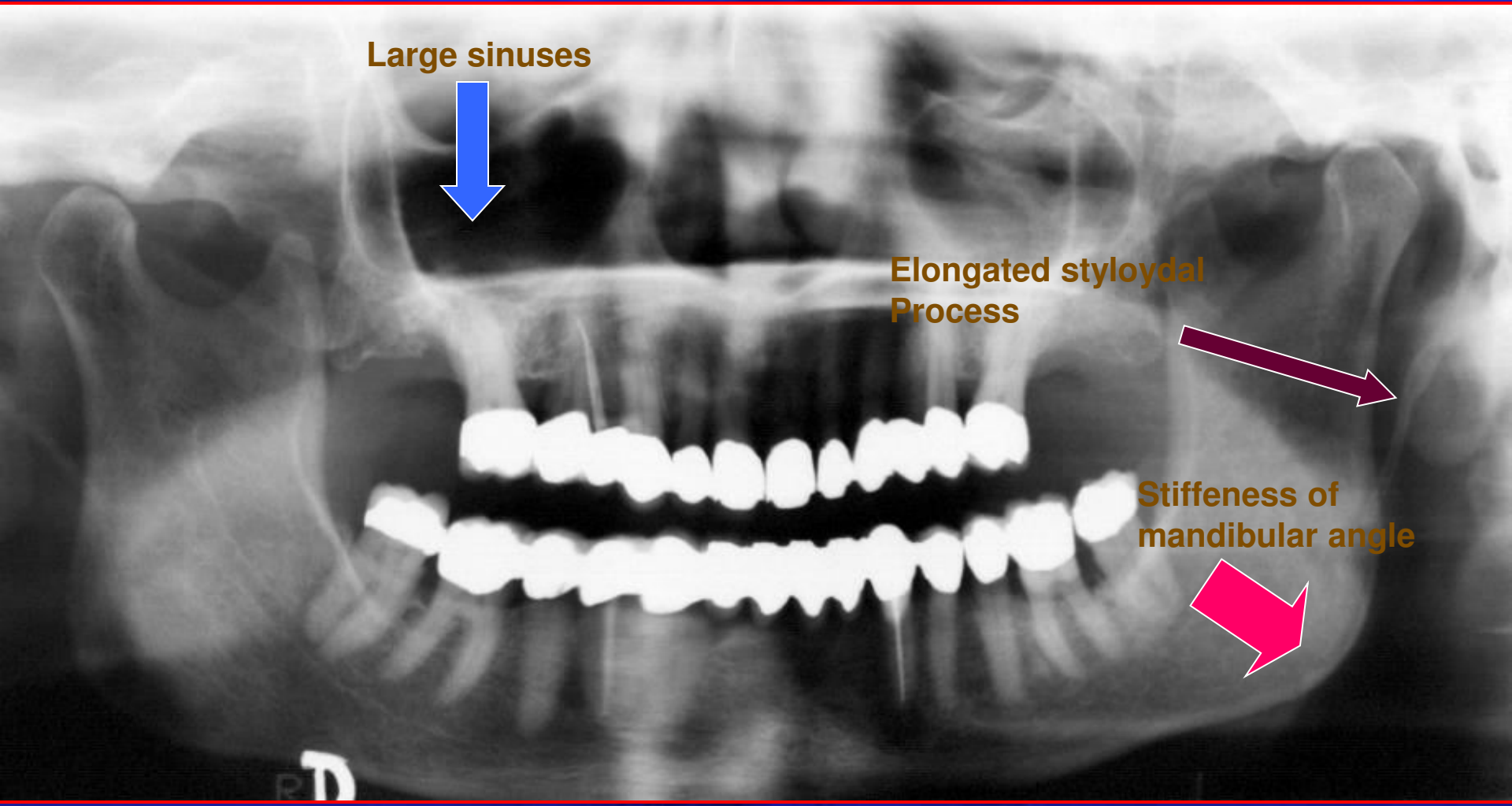
**People are often symptoms free**



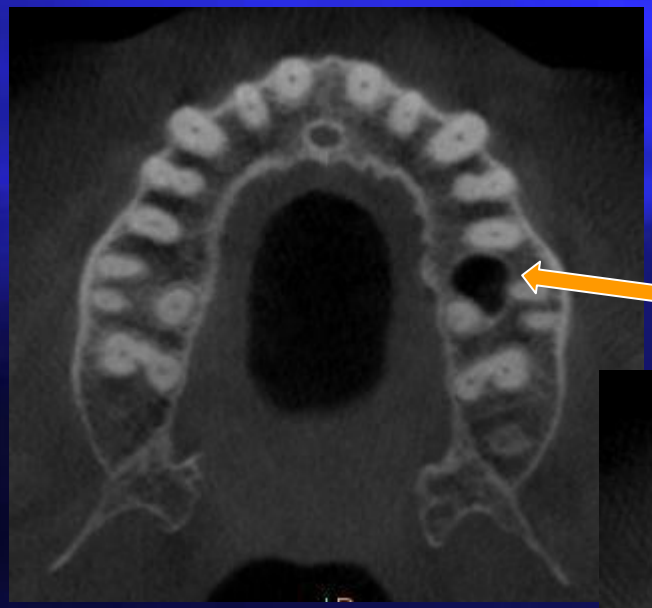
He complains only of poor esthetics

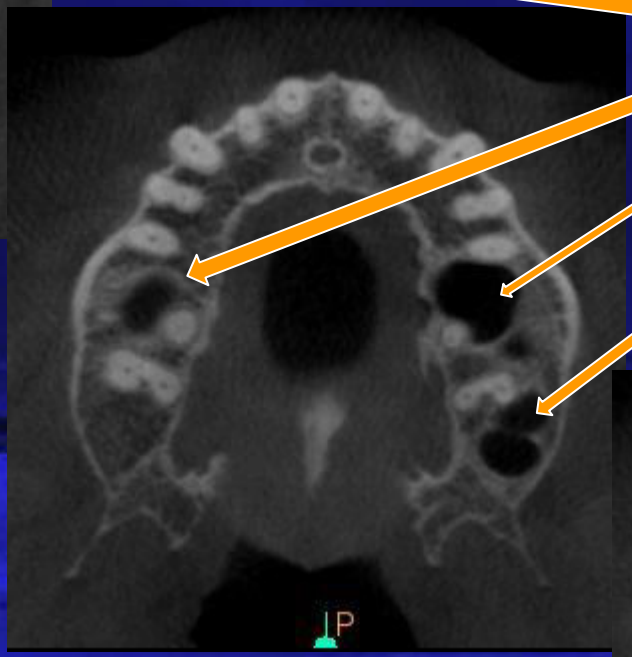


# Extraoral signs of bruxism

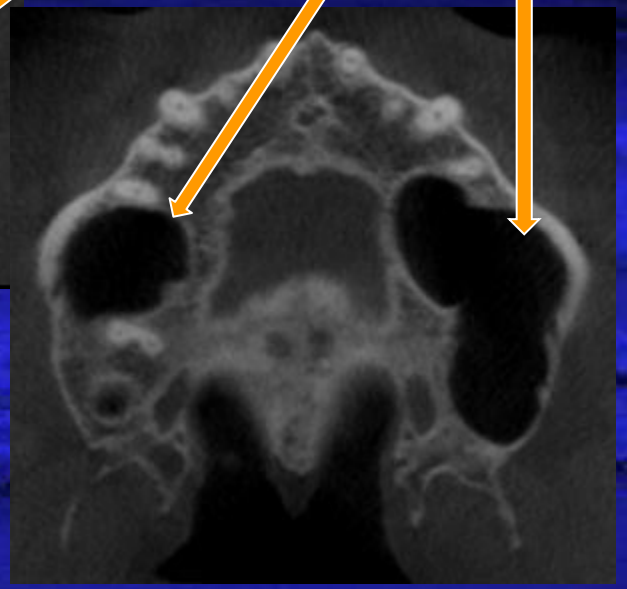


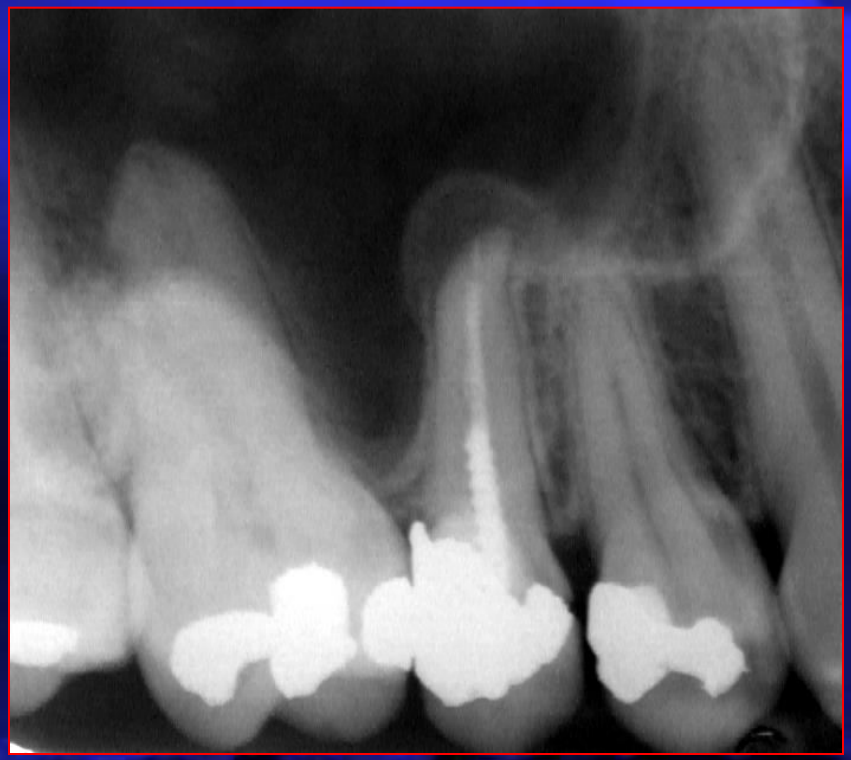
# Horizontal cuts in a 3D image



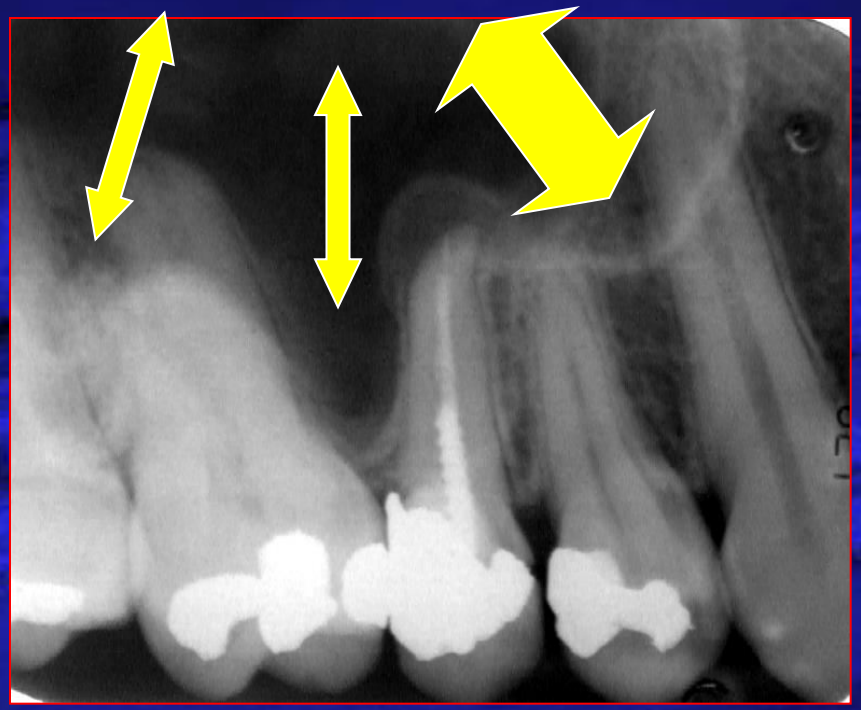



Sinusses





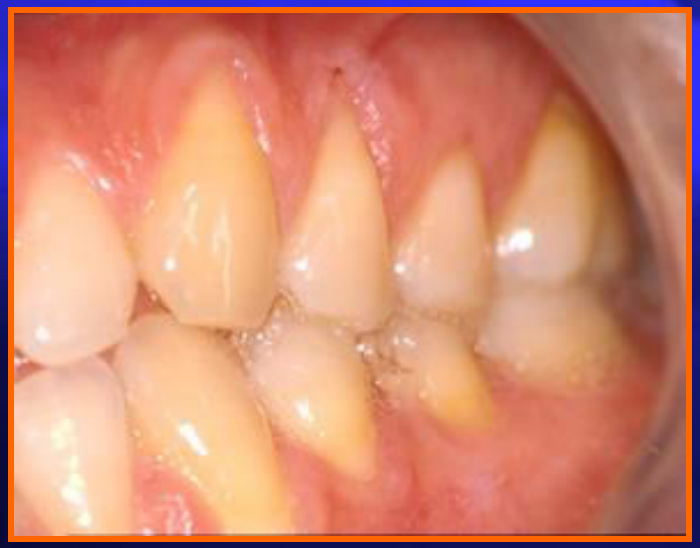
Hiperpneumatic sinus



# Lingual Parafunctions

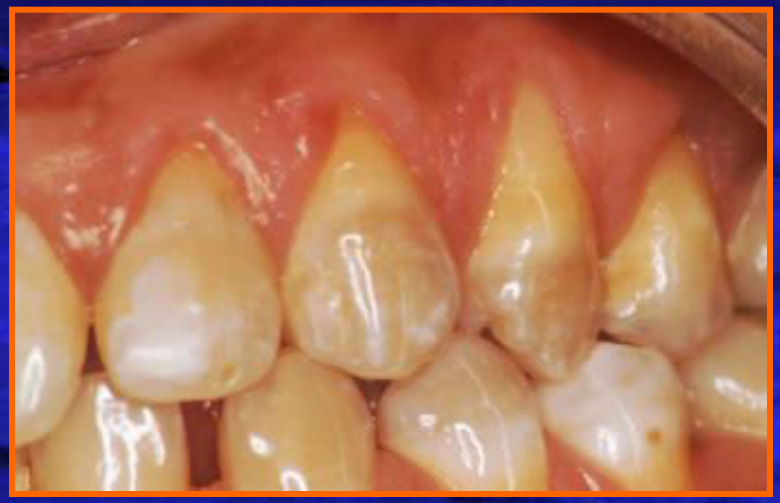
Signs:

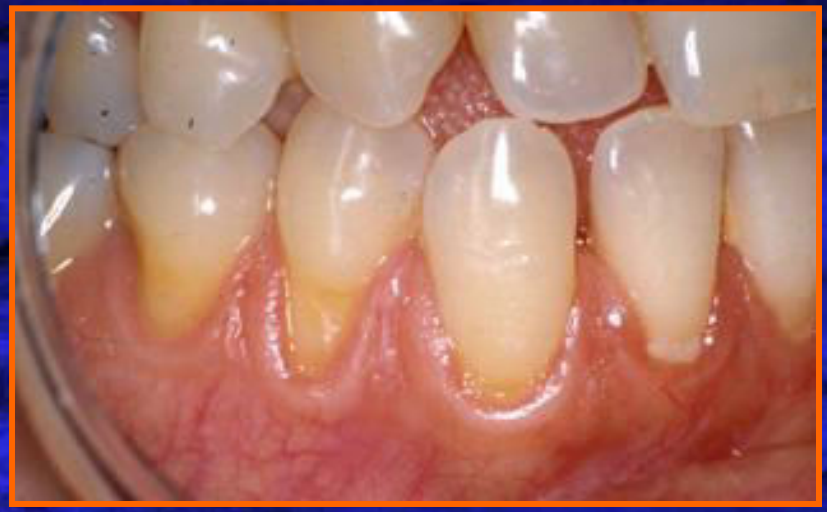
- Deshiscencies.
- Anocclusions, extrusions, tilting.
- Diasthems.
- "Lingua serrata".
- Burning syndrome (may be).
- Gingival and mucossal growns.
- Black interdental triangles.
- Glossodinias.

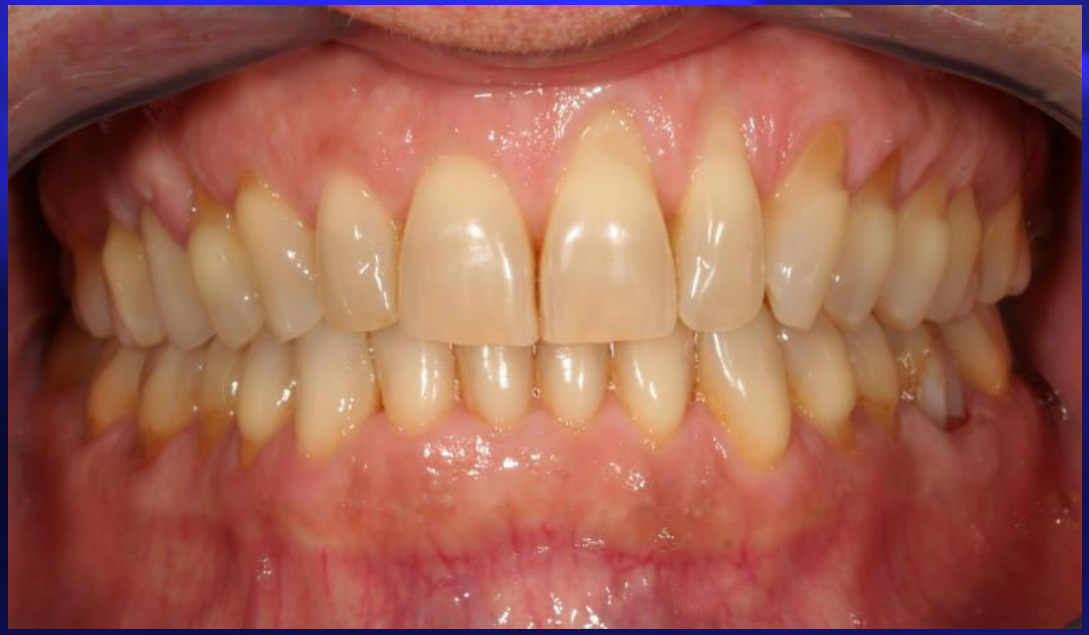


# Dehiscenties

**Tongue pushes teeth outward putting pressure on the thin osseous vestibular crest, pressure promotes reabsortion. Bad brushing and bruxism can aggravate the signs.**

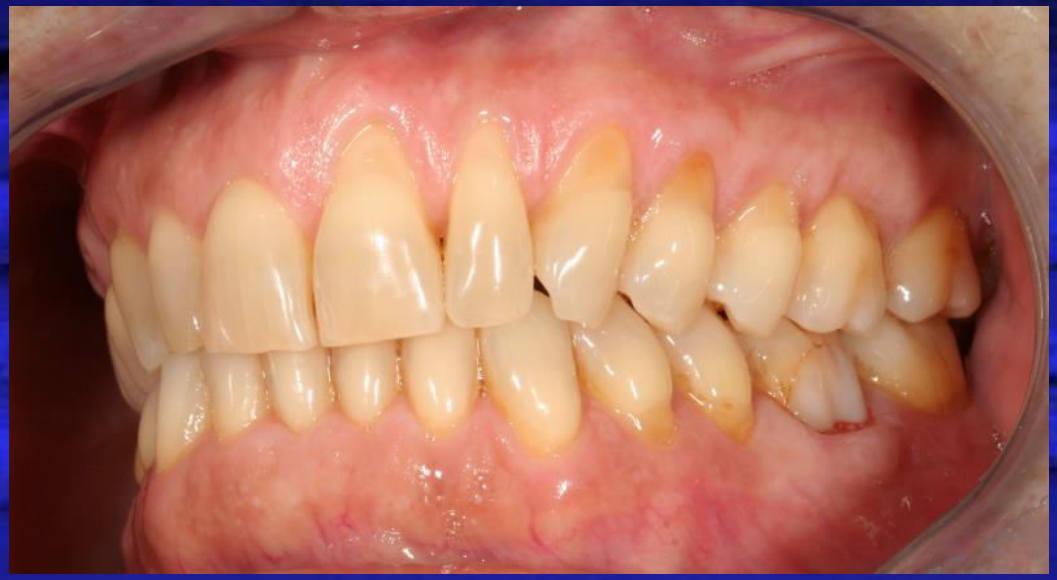




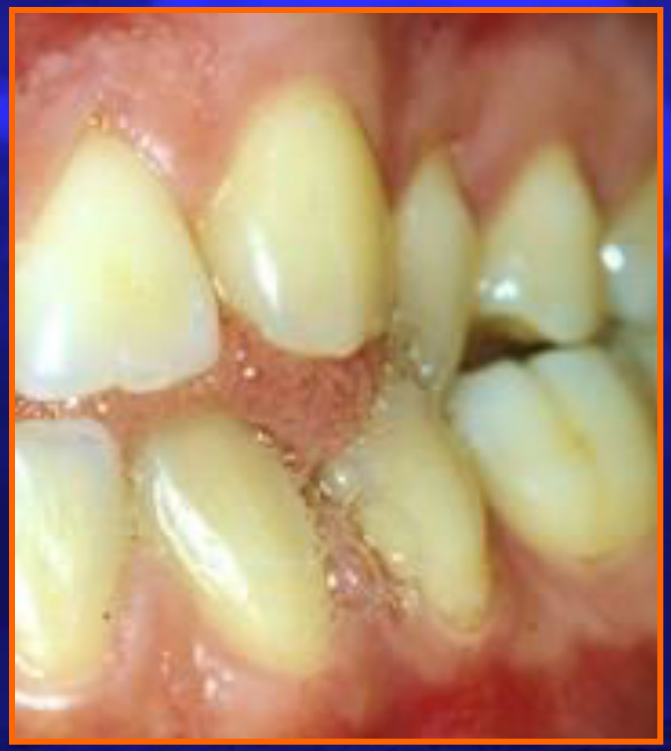


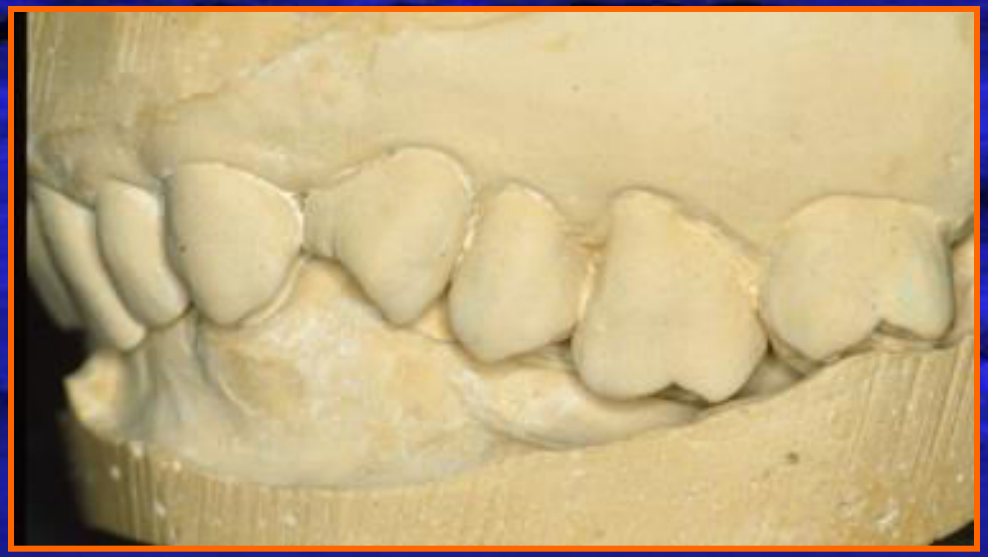
# ¿Why?

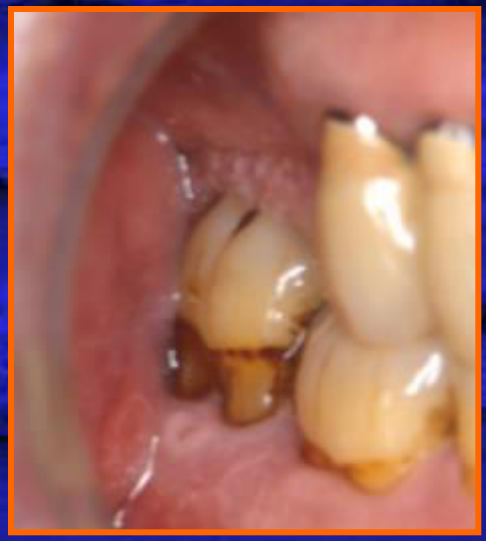
**No occlusal trauma**
**No excesive brushing**
**Not periodontal disease**



- **Extrusions**
- **Migrations**
- **Anocclusions**

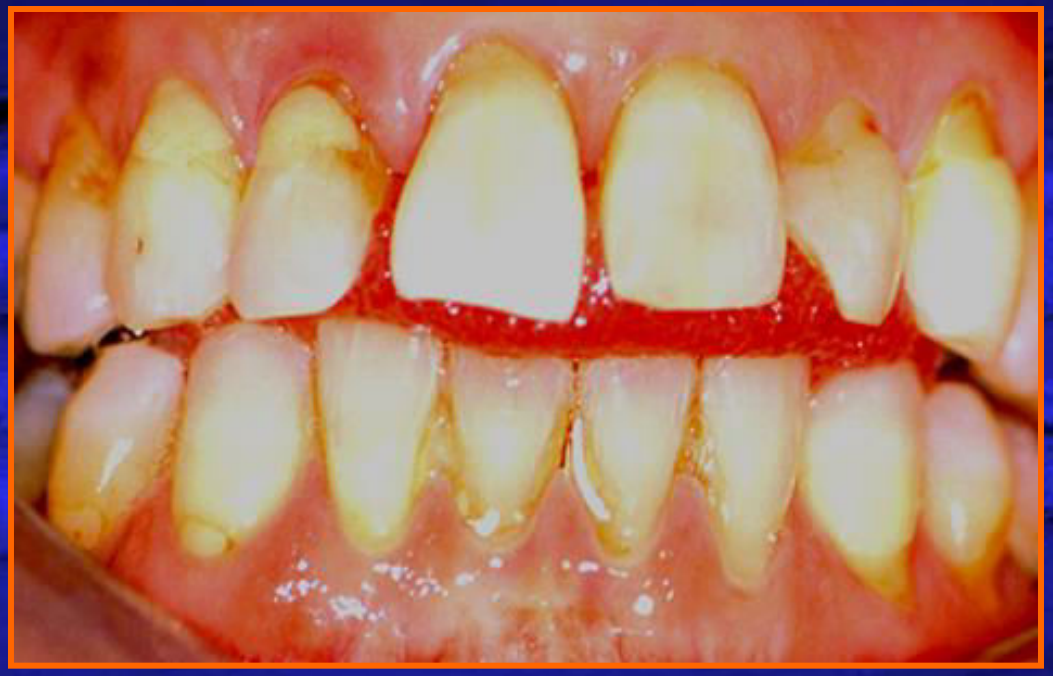


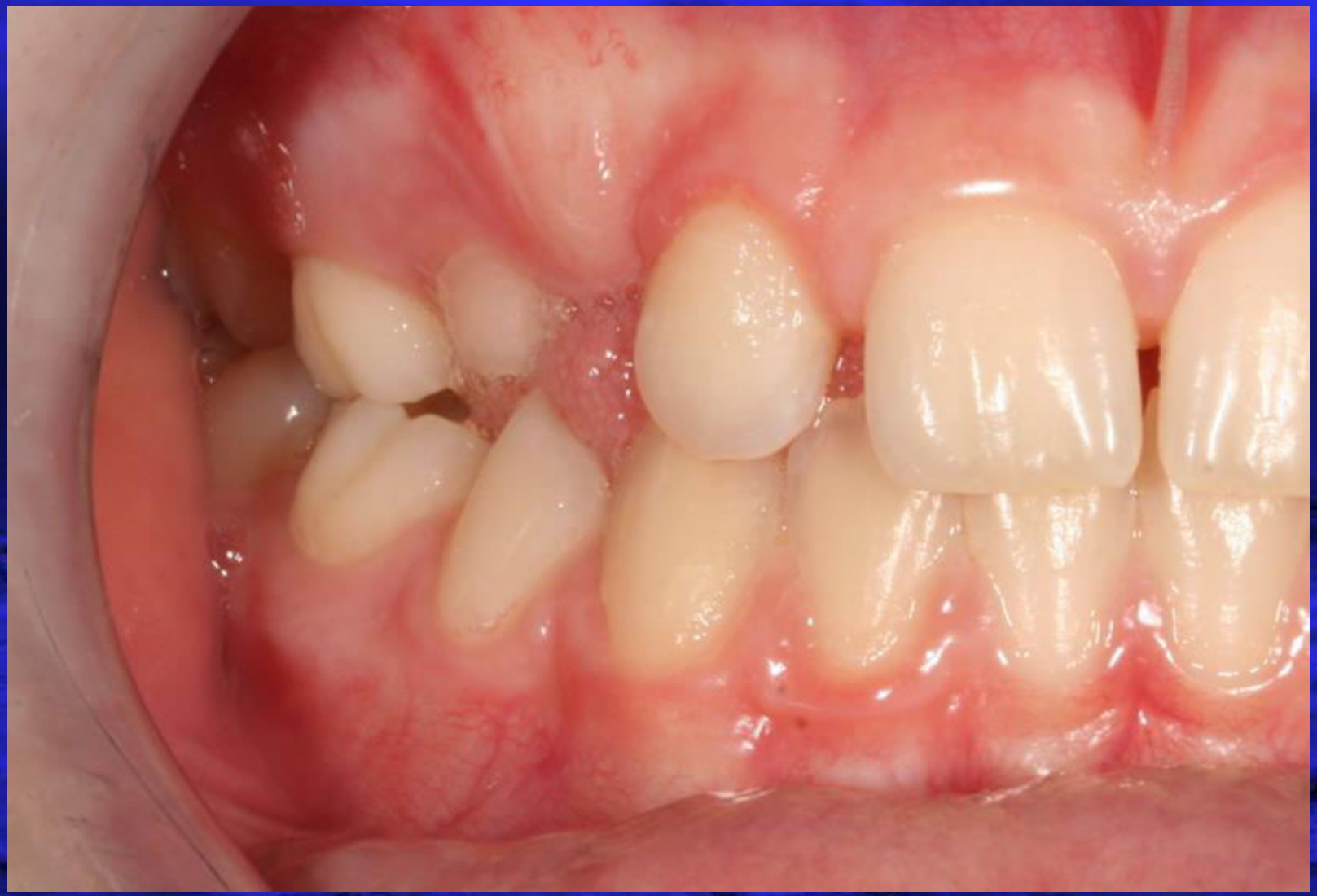


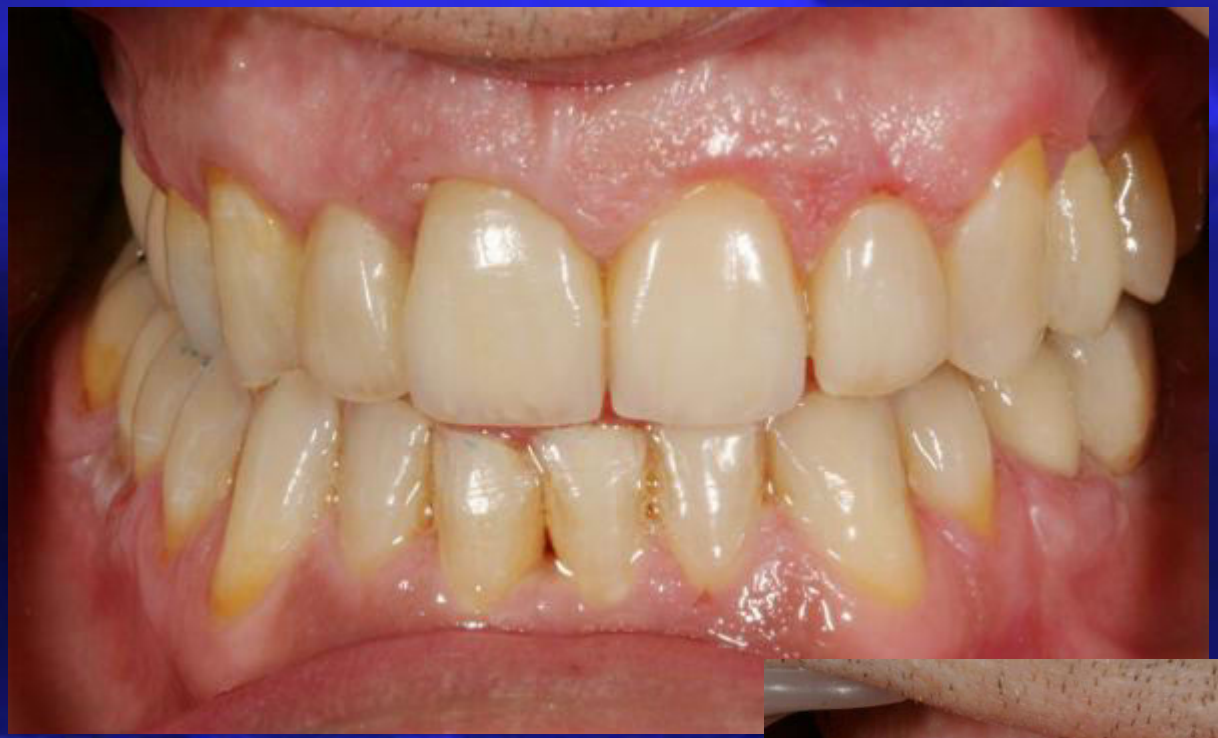


Interdental separation

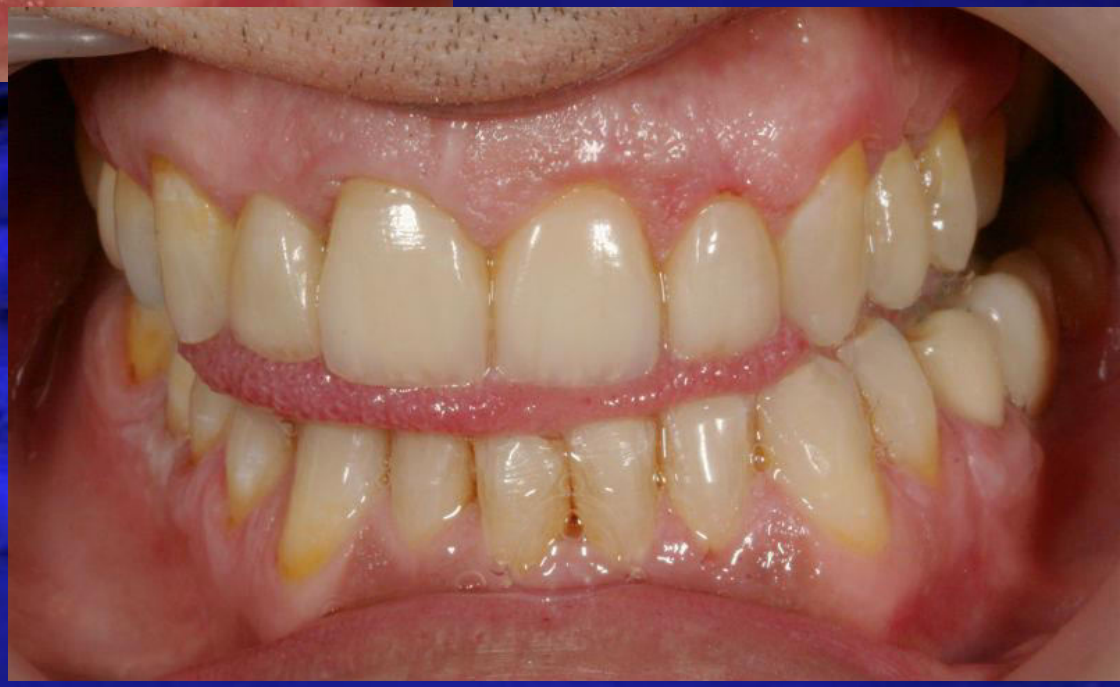
Tongue is always
Present.





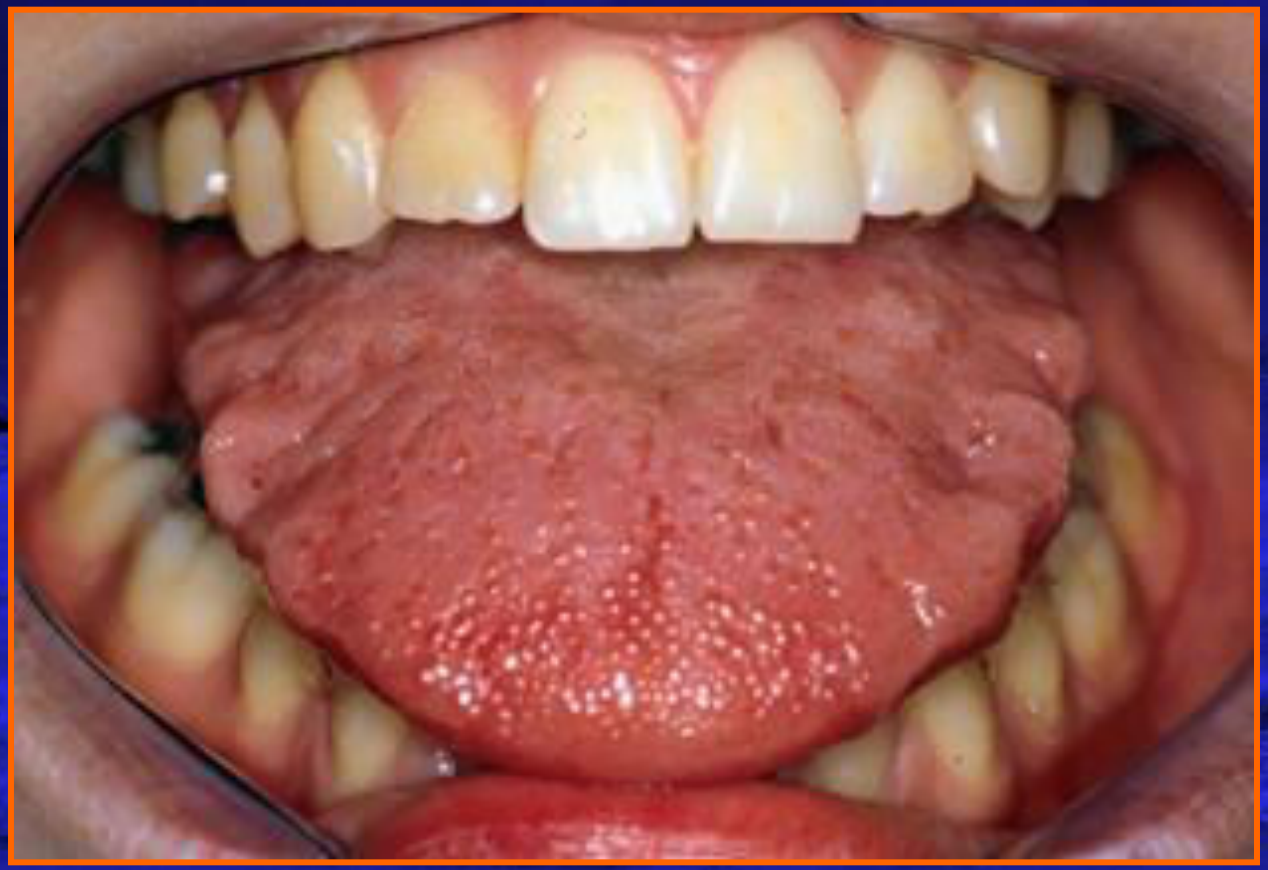


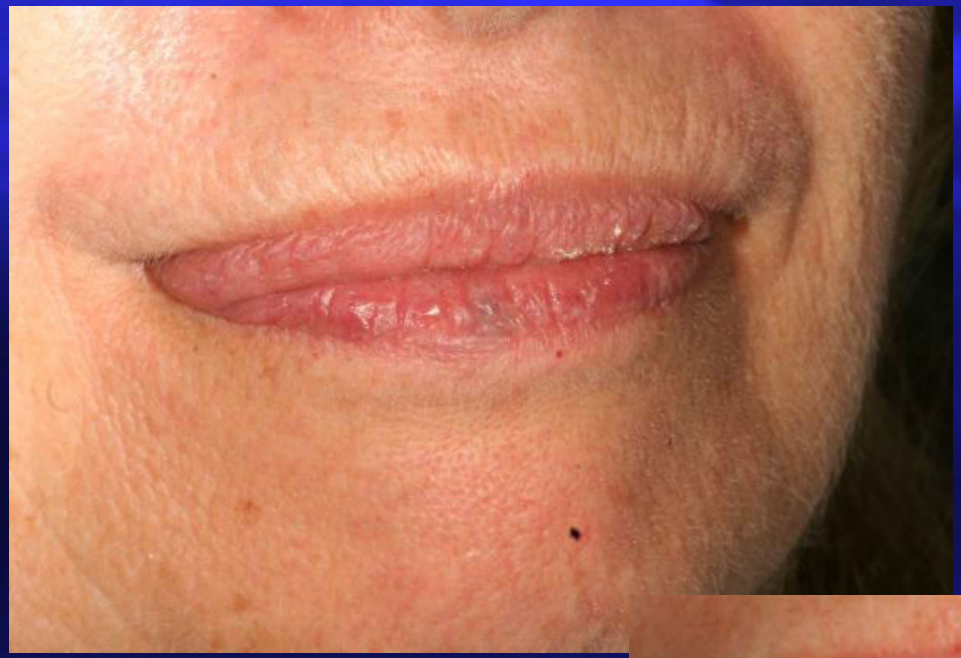
If in talking  face to face we can see a bit of tongue, we could infers that there is tongue thrust



“Lingua serrata”

**The outer aspects of the tongue reproduces the inner aspects of the dental arch**





If we see, when subject swallows, a contraction of the orbicularis m. like the one in the first image.

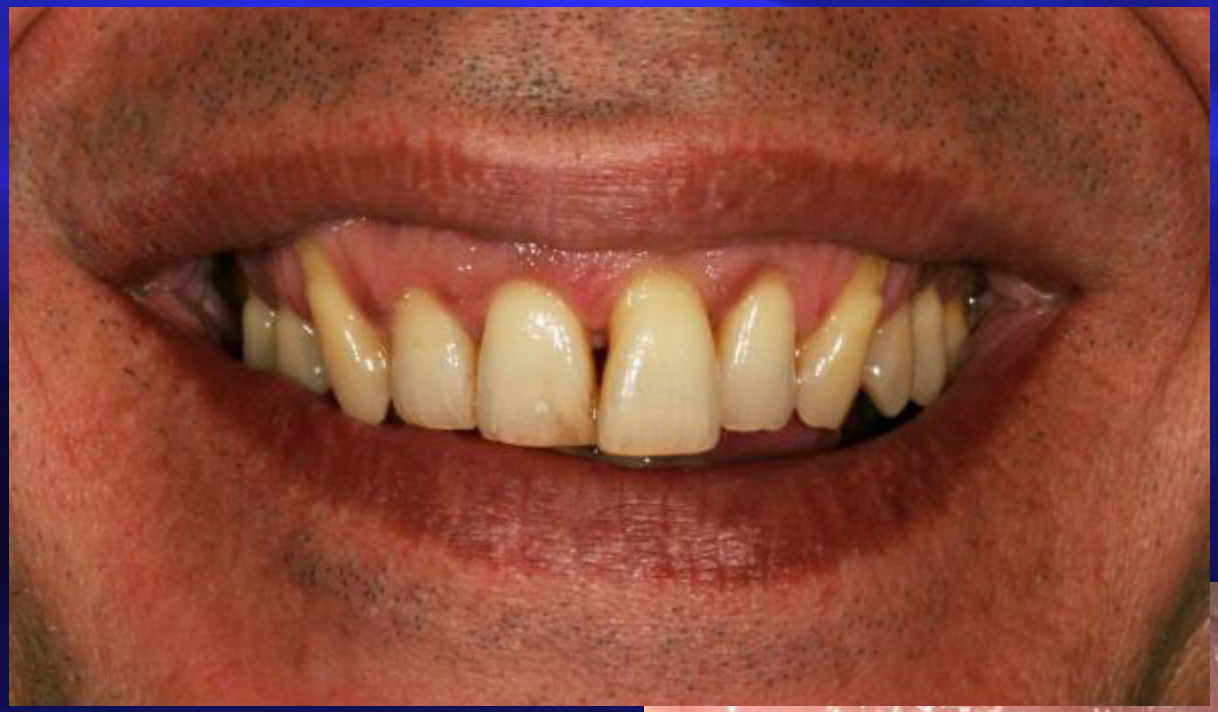
Frequently the display of the teeth is like this one.

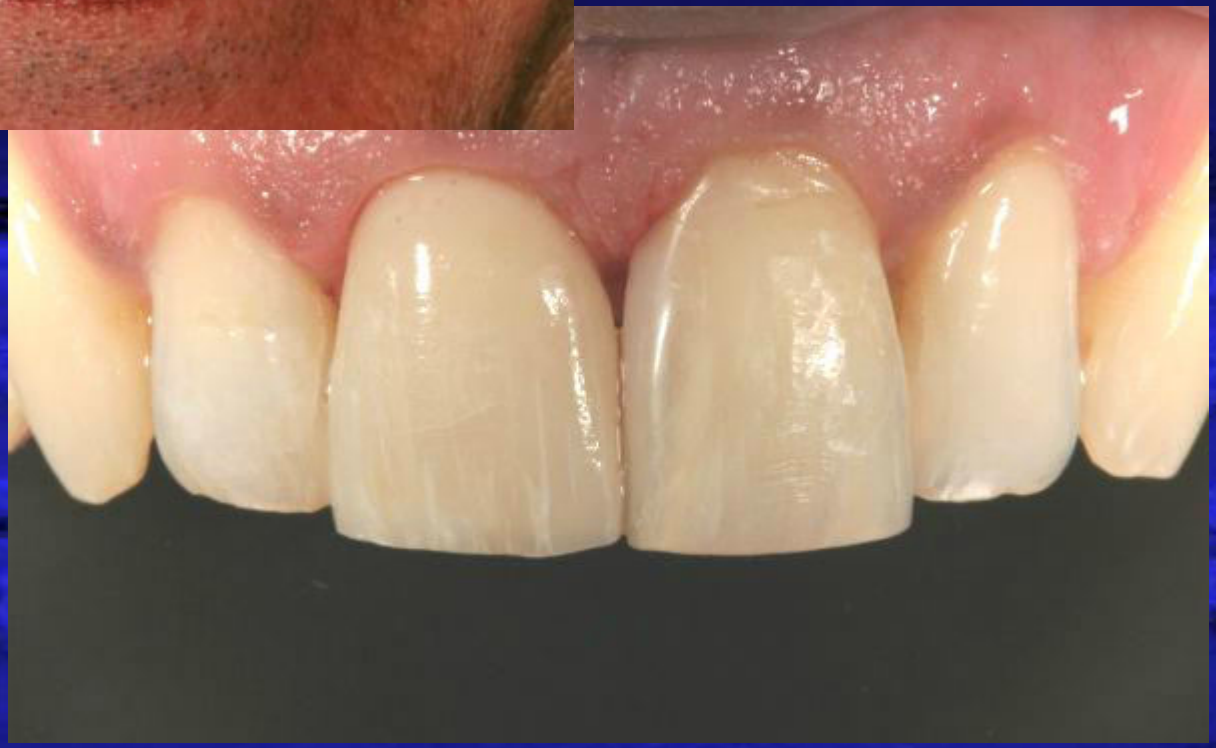
## Downward pull of the tongue

If  normal; good adaptation of all the soft tissues, especially the gums to the teeth.
If excessive; suction, aspiration of the inner mucosa of the lips and cheeks, disappearance of papillae, extrusions.
Actions: Reeducation; and if it's possible download  the contact point between teeth, stabilize the occlusal plane.

**Frontal, lateral or asymmetrical pull of the tongue.**

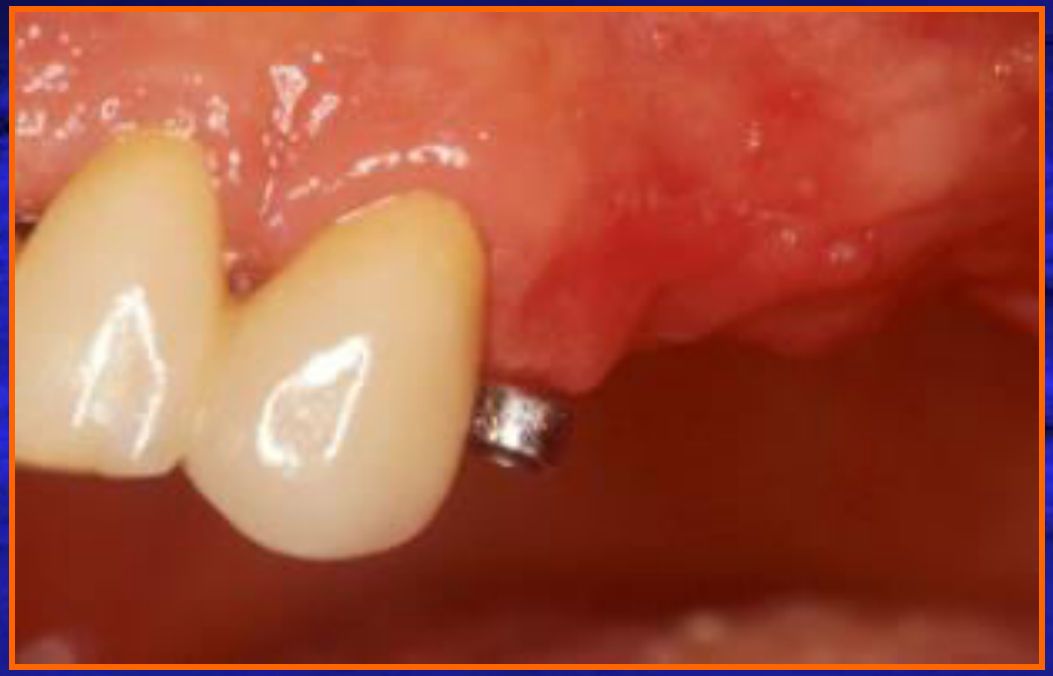
**Diastemas, extrusions, migrations, dehiscence.**
**Actions: Reeducation, orthodontics, stabilization, ferulization.**
**If nothing more is possible Dental plate with anterior rim or vestibular arch.**

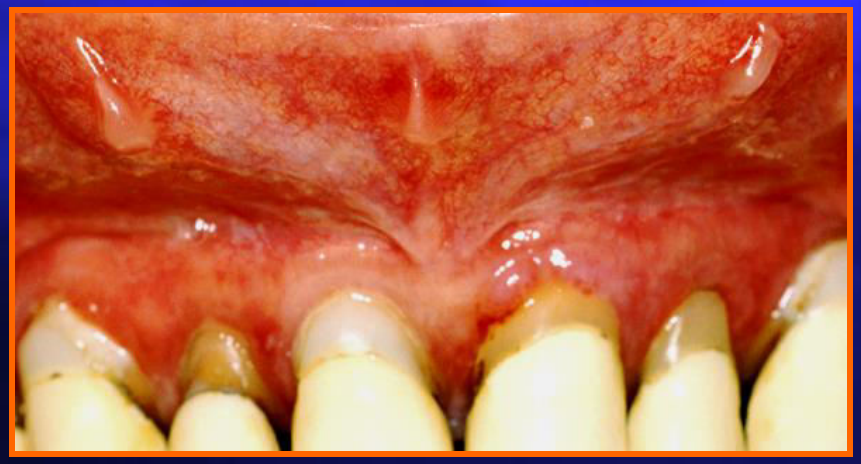




**Unforeseen effect of the continuous suction on a teeth.**
**ELONGATION**

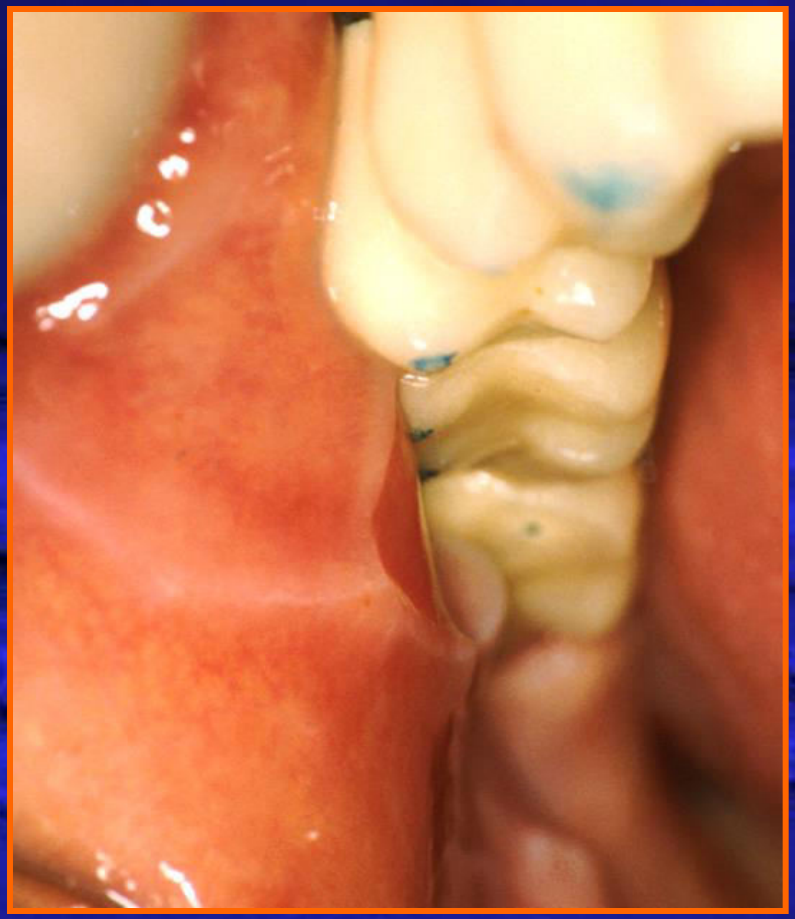
**The soft tissues adapt over the hard materials. Here molded gingiva under a external attachment**



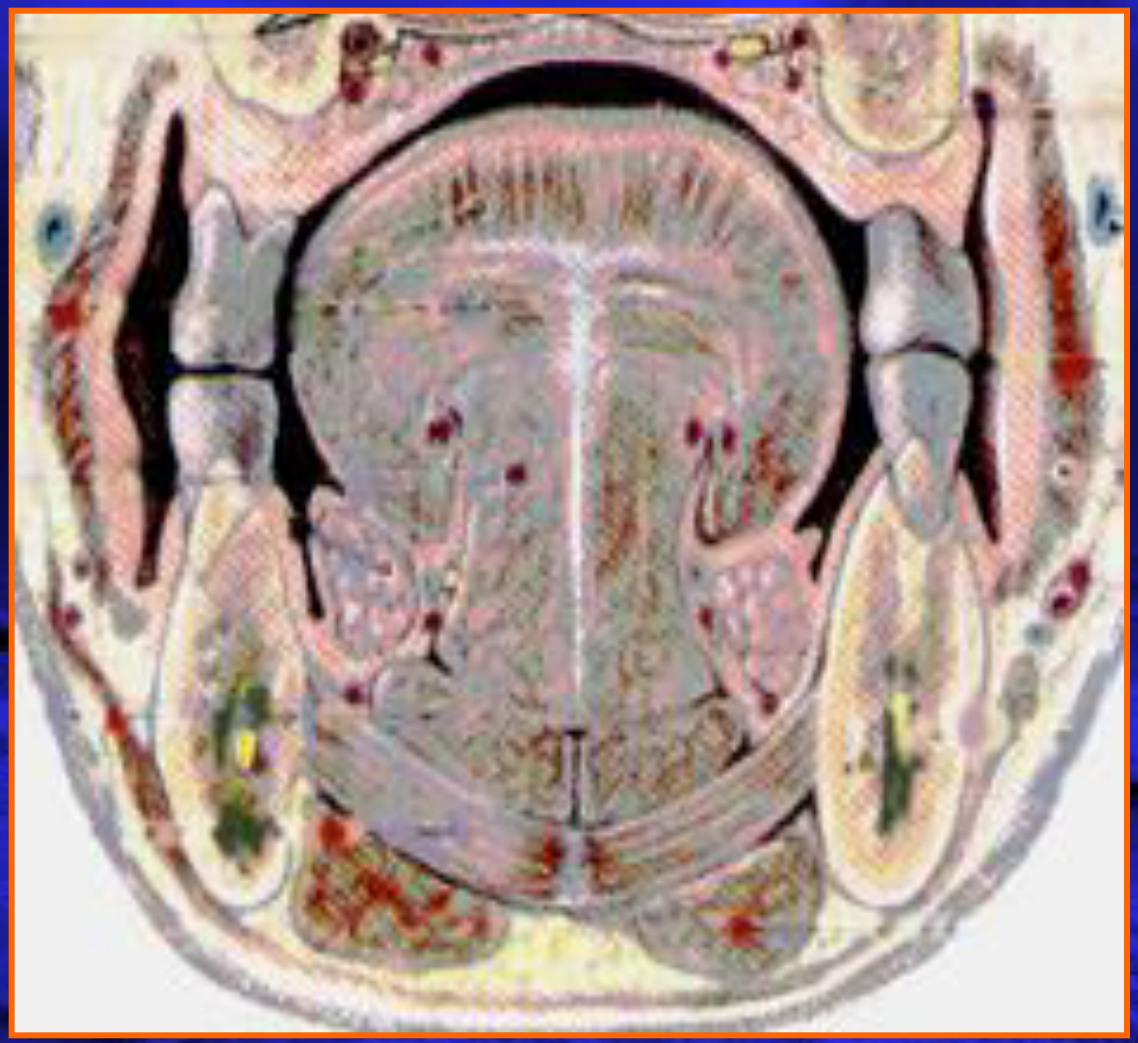


Papilla are not on the gums but in the inner aspect of the lip.

Hipertrophic “linea molaris”



**Glossodinias, pharyngeal pain, geographic tongue, burning tongue, metallic taste, “lingua serrata”, lingual papilomas, stiffening of the horizontal “Linea molaris”, papilomas of the central bridle, every mucosal grow, pulpar papilomas included; can arise from a sole cause: “Diapneussias”. It is the same as saying: suctions, local changes in the balance of intraoral vacuum**.

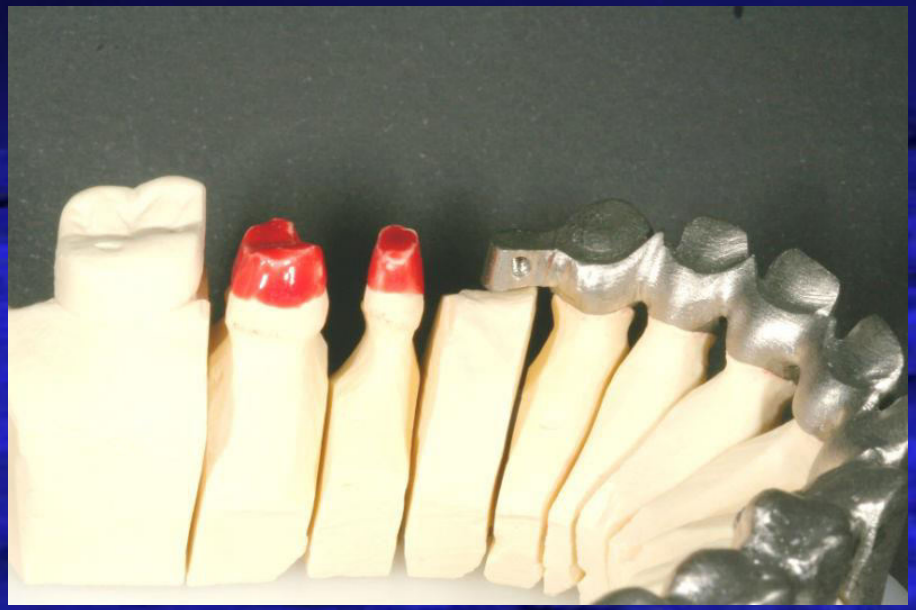


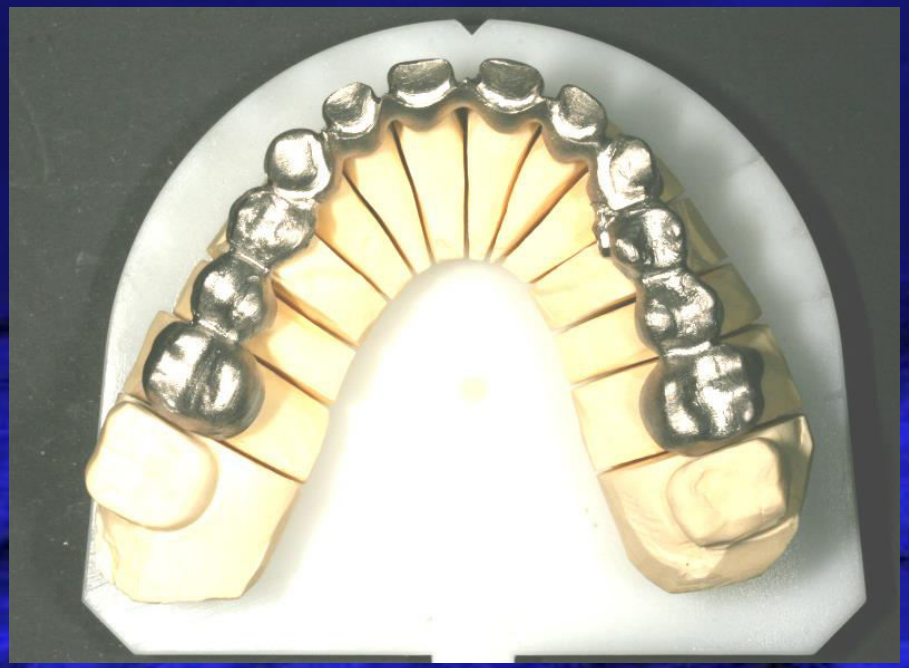
## Oral pneumatic pump

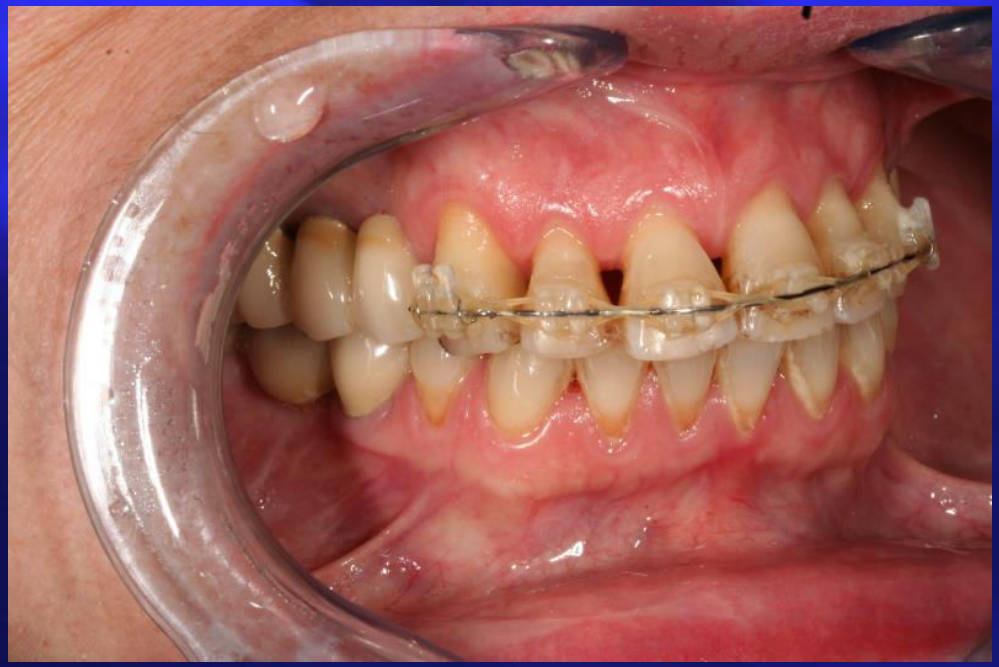
**The tongue is the "plug" when tractioned down by the activity of the infrahyoid mussels.**

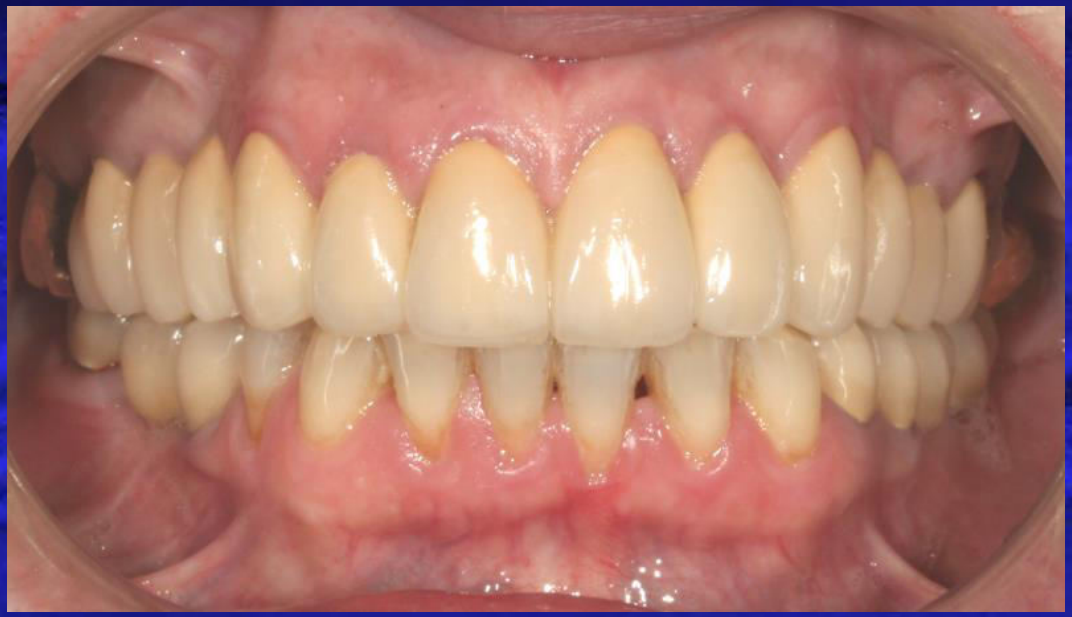
## Fighting the tongue push.

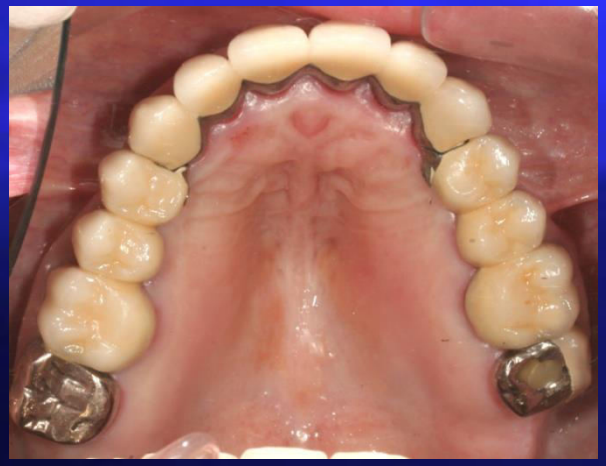
a) Orthodontic alignment.
b) Metal ceramic contention.
c) Segmentation: Three different segments united by semi rigid custom made connectors.

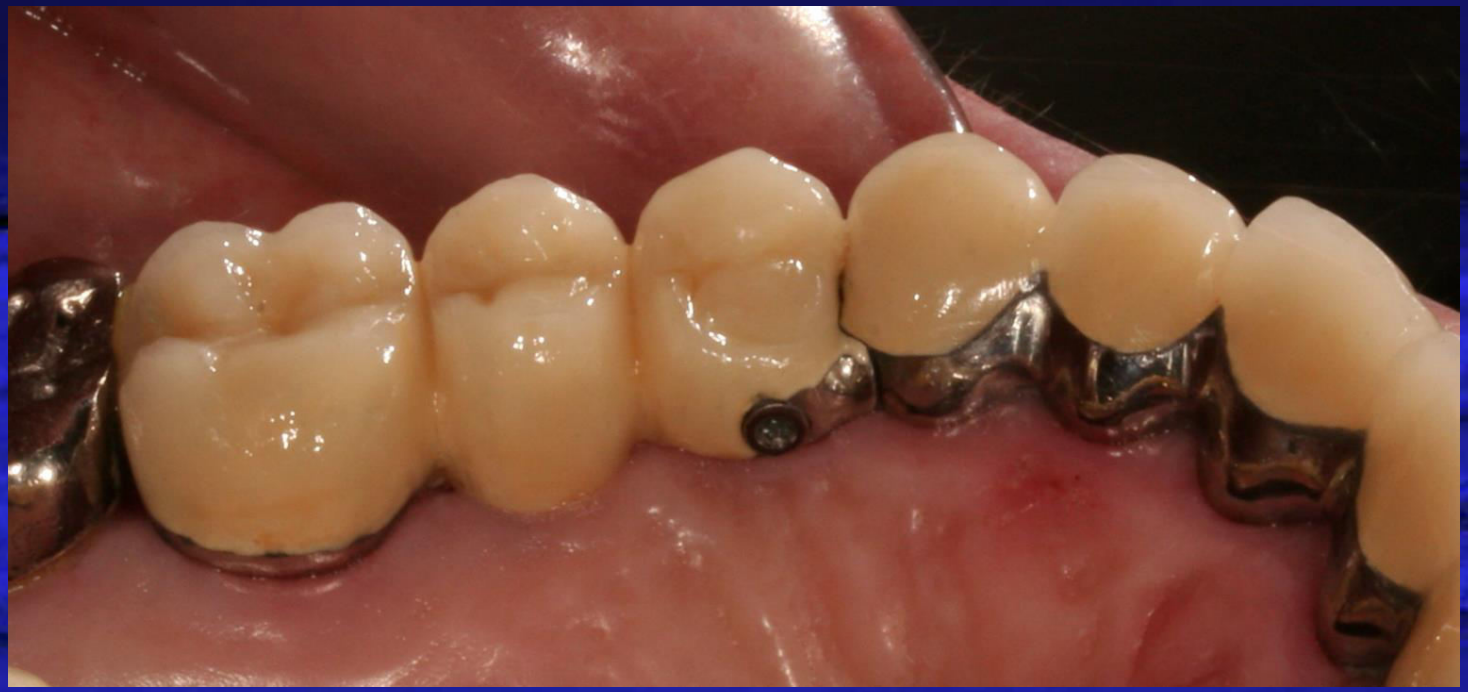






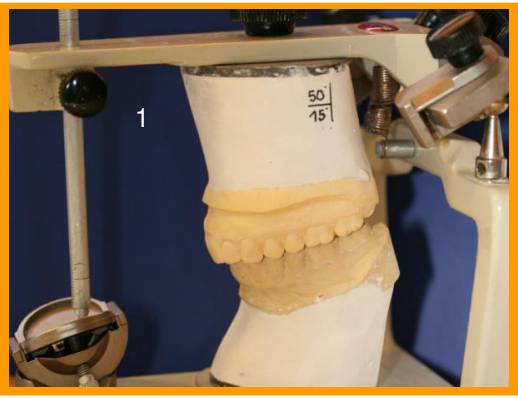






Most of parafunctional symptoms, specially the ones related to bruxism, can be alleviate by an occlusal bite plate but…

**It has to be carefully build**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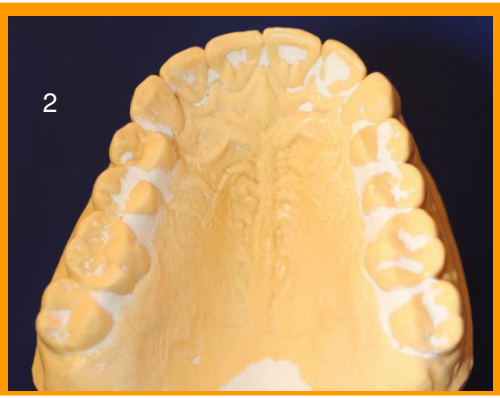
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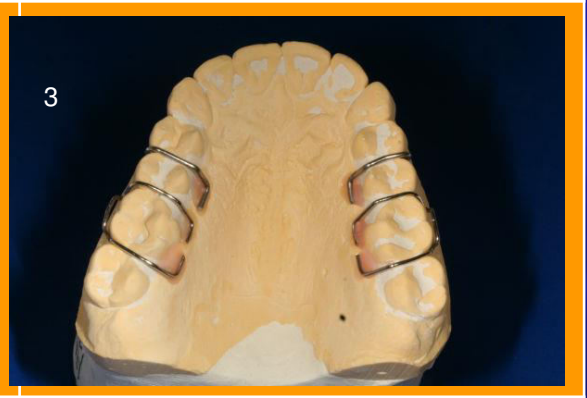
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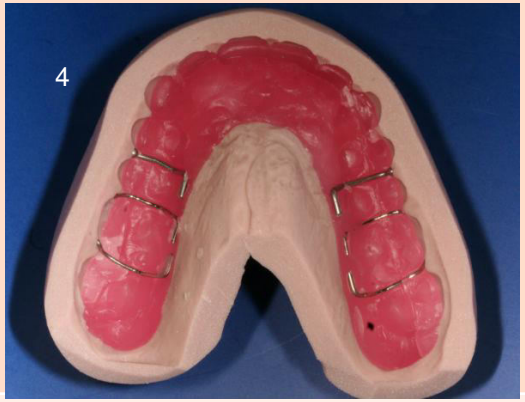
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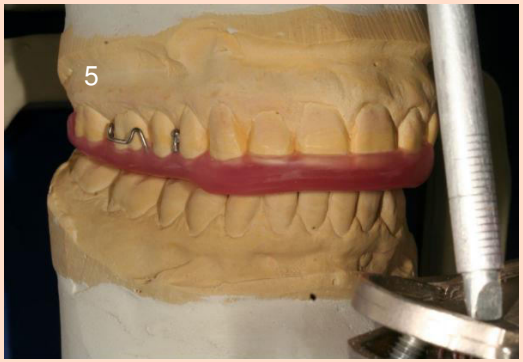
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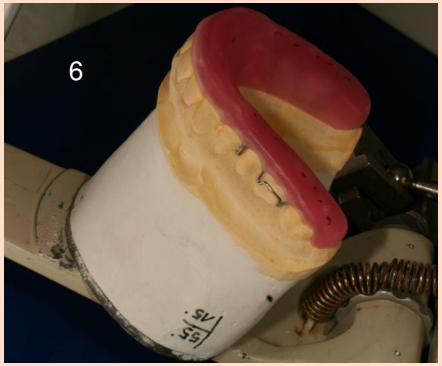
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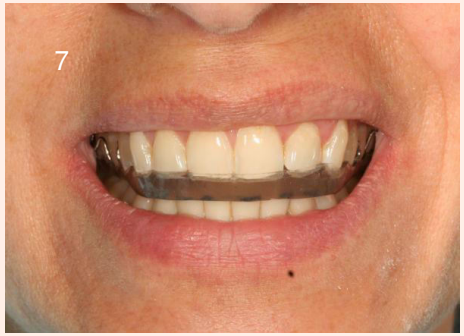
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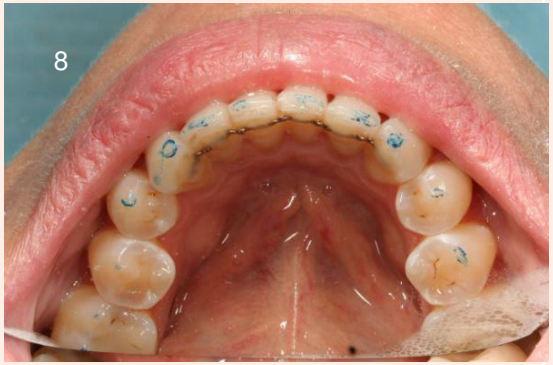
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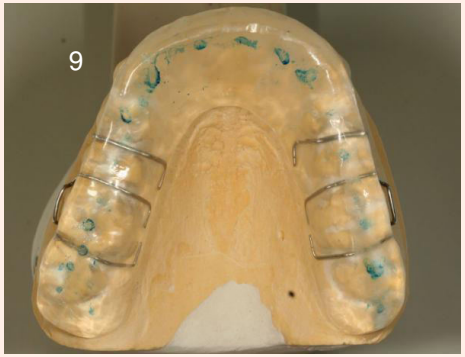
9

1. Good hart stone models, from alginate imprints (if possible booth vacuum mixed).
2. Duly mounted on a semiajustable articulator.
3. Retentive zones in the cast well obliterated with gypsum.
4. Retention by Adams clasp and ball ones.
5. Wax carefully modeled in the range of the articulator function.
6. Little Incisal edge if necessary to contain the push of the tongue.
7. Distributed contacts on a curved Wilson plane (avoid deep ones).
8. Process with acrylic under pressure and high temperature.
9. Adjust in mouth with watchful precision.
10. Obtain symmetrical an distributed contacts in near centric relationship.

Until now my own
experience.
Thanks to pay attention !