

Deep Bite

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In the Name of Allah

the Compassionate the Merciful

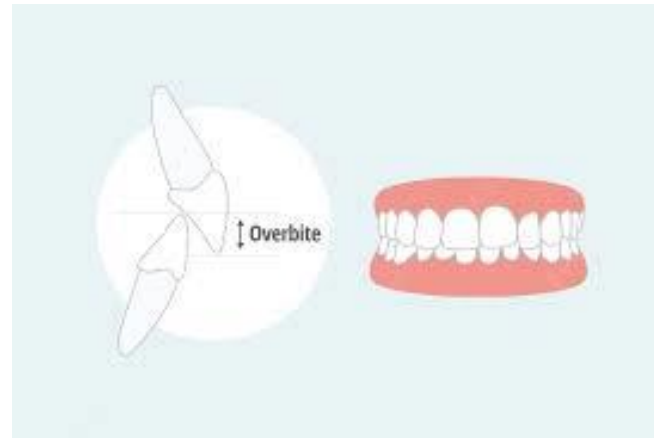
Goals

- Get energy for the week
- Think differently
- Bring a new insight for the next session



Definition

- Deep bite is one of the most common malocclusion seen in children as well as adults and is most difficult to treat successfully
- Bishara: Malocclusion in which the mandibular incisor crowns are excessively overlapped vertically by the maxillary incisors when the teeth are in centric occlusion.
- predisposes a patient to:
 - periodontal involvement
 - abnormal function
 - improper mastication
 - excessive stresses
 - Trauma
 - functional problems
 - Bruxism
 - Clenching
 - temporomandibular joint disturbance



Classification

- dentoalveolar deep bite
- skeletal deep bite
- incomplete deep bite
- complete deep bite



Etiology

- Inherent factors
 - Tooth morphology
 - Skeletal pattern and malocclusion
 - Condylar growth pattern
- Acquired factors
 - Muscular habit
 - Changes in tooth position
 - the loss of posterior supporting teeth
 - Lateral tongue thrust habit



Diagnosis of Deep Bite

By:

- supraeruption of upper and/or lower incisors
 - infraeruption of posterior teeth
-
- linear measurements from the base of the alveolar process;
Cephalometric analysis



پیامبرها (ع)
از یک ریگرد انشود و بهم پشت نکند و بهم
السنن الکبری، ح ۲۱۰۶۰
دشمنی و حسادت نورزید و با هم برادر باشید.

Tx of Overbite before Overjet

For:

- stability in function
- Retention

to establish:

- the proper interincisal relationship of overbite to overjet
- inter-incisal angles

Tx modalities of Deep Bite

Methods of deep bite correction:

- 1) Extrusion of posterior teeth
- 2) Intrusion of anterior teeth
- 3) Combination of both
- 4) Proclination of incisors
- 5) Surgical



Extrusion of Posterior Teeth

- horizontal growing patients
- removable appliances
 - bite planes
 - modified bite planes
 - myofunctional appliances..... *extrusion of posterior teeth.....opening the bite*
 - Activator
 - Bionator
 - Functional regulator
 - Twin blocks allow the extrusion of posterior teeth thus opening the bite.
- Cervical headgears a vertically downward component of force (200-300 g per side)14-16 h per day extrusion of the molars
- Fixed modified Nance appliance
- fixed bite plate with glass ionomer cement
- bonded bite planes with composite resin (indirect technique) on the palatal aspect of maxillary incisors

Ant bite plate



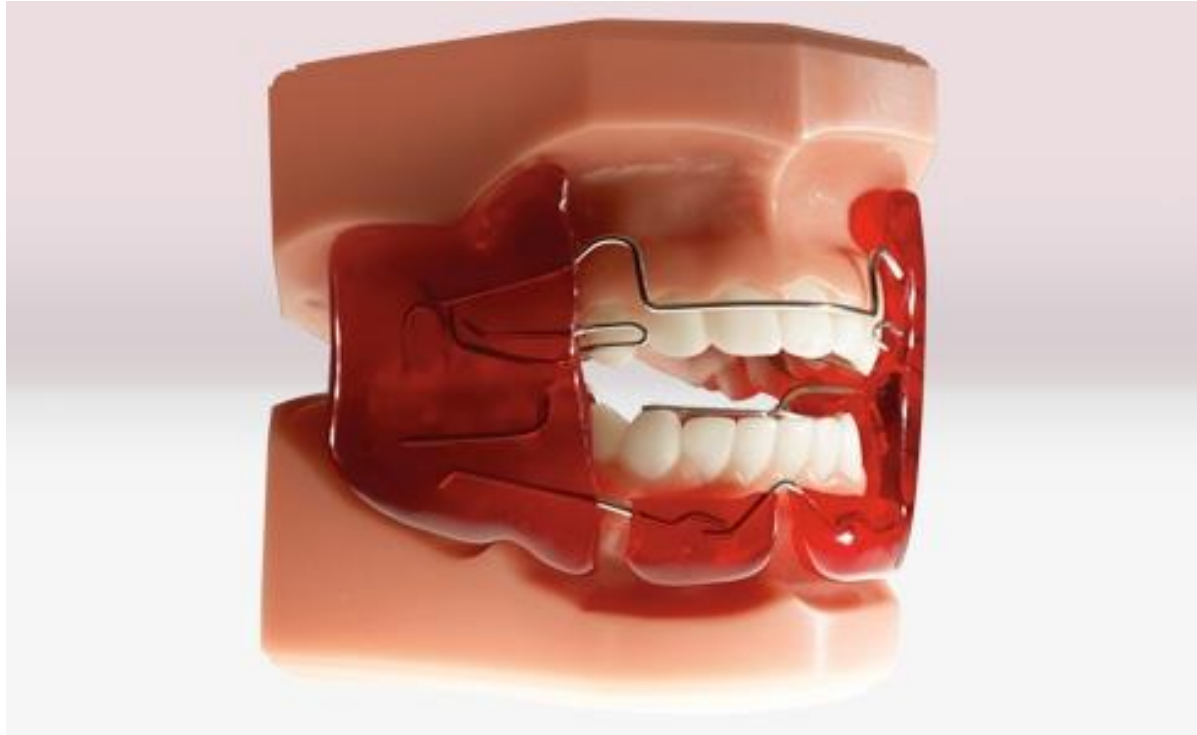
Activator



Bionator



Frankle



Cervical HG



Nance



Bonded bite planes



Intrusion of Anterior Teeth

Biomechanics of intrusion

- pass through center of resistance
- rotational moment

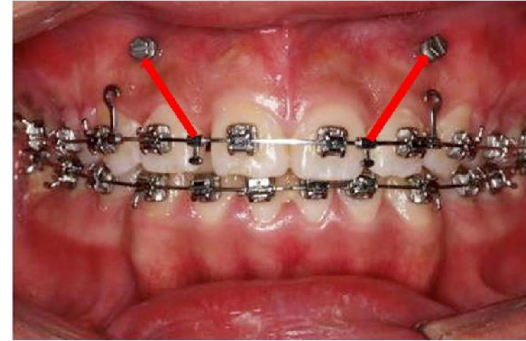
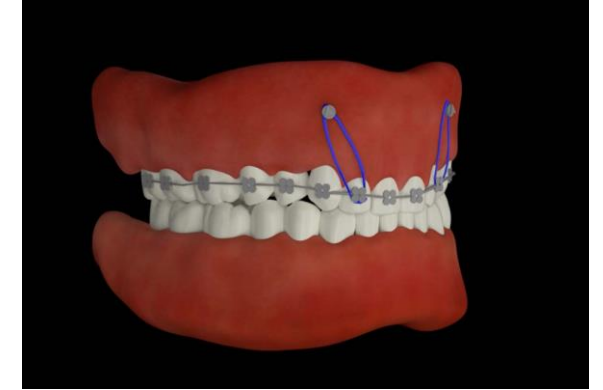


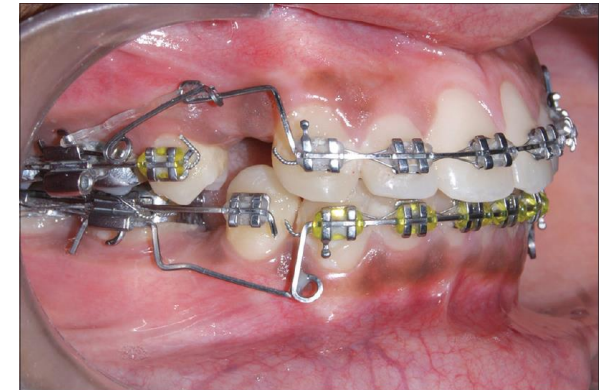
Figure 4: Application of mini-screws distally in maxillary lateral incisors



- The possibility of flaring of incisors is more likely to occur specially in class II div 1 than class II div 2.

Optimal intrusive force for anterior intrusion

- various optimal intrusive forces
 - 15-20 g for each upper incisor and 10-15 g for each lower incisor
- In adults, the forces are to be applied carefully and somewhat towards a lower range



Protrusion

- Removable appliance
- Fixed appliance
- SR



Correction of Deep Bite with Orthodontics and Surgery

- An adult.....more than 6 mm overbite or 8 mm of overjet could be considered a candidate for surgery solely on the basis of dental relationships, without even considering facial esthetics

The surgical treatment options in deep bite patients are:

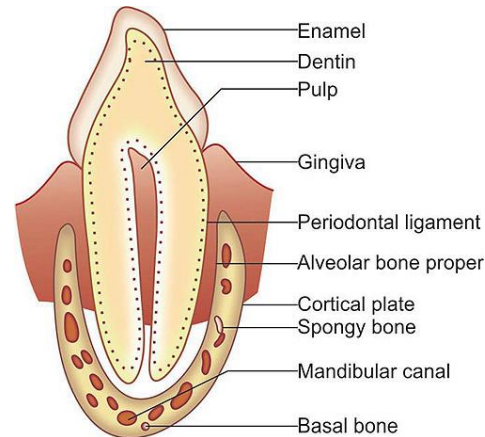
- 1) Orthodontics and interpositional genioplasty
- 2) Orthodontics and Inferior onlay mandibuloplasty
- 3) Orthodontics and mandibular advancement
- 4) Orthodontics and total subapical mandibular advancement
- 5) Orthodontics and inferior repositioning of maxilla and mandibular advancement
- 6) Orthodontics and combined maxillary and mandibular surgery



Intrusion and Apical Root Resorption

Depends to:

- anatomical environment of the root
- In young.....apex spongy bone and long marrow spacesA light continuous force
- In Adults.....bone of the apical region is fairly compact.....a light interrupted force
- light force.....five to six weeks.....less tendency to root resorption



Summary

- Deep bite is a malocclusion that occurs in the vertical plane of space. Some degree of vertical overlapping or overbite is a normal feature of human dentition. However, some patients present with excessive overbite termed as deep bite or deep overbite. The deep bite in the permanent dentition may be caused by inherent factors or factors acquired during the life of that dentition.
- A successful treatment of deep bite requires a careful analysis of the factors contributing the problems. During the treatment planning, considerations should be given to the soft tissue, skeletal pattern, stability, occlusal plane, interocclusal space, treatment time and age of the patient.

Summary cont'd

- It is widely accepted that correction of deep bite is both easier to accomplish and more stable when it is performed on growing patients than when it is attempted on those with no appreciable growth remaining. Adults often need only correction of excessive overbite either due to its isolated nature or a demand for limited treatment. In adults, this treatment is often part of periodontal, restorative and/or temporomandibular joint therapy.
- Deep overbite can be corrected by many ways like intrusion of anteriors, extrusion of posteriors, combination of anterior intrusion and posterior extrusion, proclinating anteriors or surgically. However, it should be decided which method will be more beneficial or which will improve the patients facial appearance and functional efficacy.

Reference

- Proffit, 6th edition, Ch.14, Pages:484-492
- DOI: [10.21767/2469-2980.100029](https://doi.org/10.21767/2469-2980.100029)

Thanks for Your Attention

Any Questions?



For the slide presentation you can visit:

www.drkarandish.ir

