



# Posterior Crossbite: Initial or late correction?

BY

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# Contents

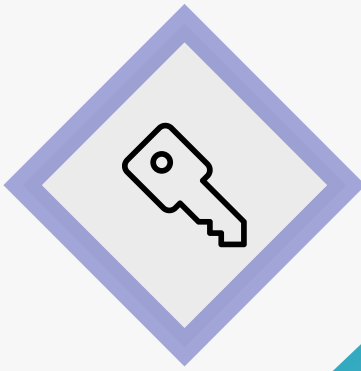
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- ✓ *Definition*
- ✓ *Incidence*
- ✓ *Etiologies*
- ✓ *Treatment modalities*
- ✓ *Crisscross elastics*
- ✓ *Philosophy for Elastics*



- **Crossbite:** a discrepancy in the buccolingual relationship of the upper and lower teeth, as the buccal cusps of the lower teeth occlude buccal to the buccal cusps of the upper teeth.





**The reported  
incidence of posterior  
crossbites ranges  
from 7% to 23% of the  
population**



A unilateral CB commonly arises as a result of a narrow maxilla that may be the result of genetic or environmental influences, or a combination of both. A unilateral CB often manifests as a discrepancy between the upper and lower centerlines that may also be associated with facial asymmetry



## Etiologies

01. Prolonged retention or premature loss of deciduous teeth
02. Crowding
03. Palatal cleft
04. Genetic control
05. Arch deficiencies
06. Abnormalities in tooth anatomy or eruption sequence
07. Oral digit habits
08. Oral respiration during critical growth periods
09. Malfunctioning temporomandibular joints



**Betts et al stated that the posterior crossbite does not confine itself to dental dysplasias but is more often related to an underlying skeletal problem.**

**Skeletal crossbite can result from one of the following maxillomandibular combinations:**

- **Narrow maxilla, normal mandible.**
- **Normal maxilla, wide mandible.**
- **Narrow maxilla, wide mandible.**

# **Treatment modalities**

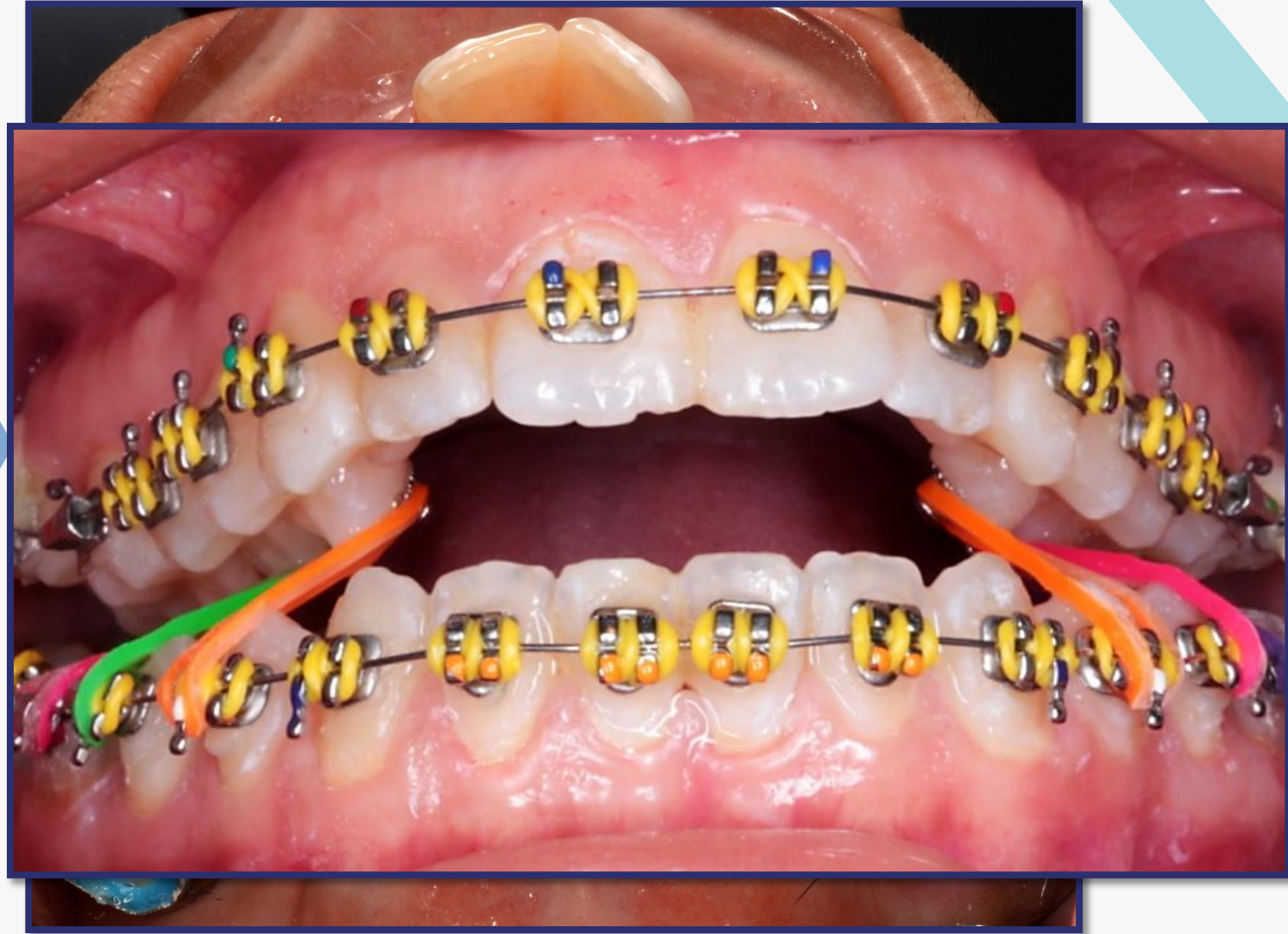




**Growing patients**



**Adult patients**



The background features a blue gradient with geometric shapes: a teal arrow-like shape on the top left and a blue diamond on the bottom right. A network of nodes and edges is overlaid, with some nodes highlighted in white. The text "Crisscross elastics" is centered in a red serif font.

# Crisscross elastics

The purpose of elastic wear is to help the teeth to move in the correct direction. Braces alone may not be able to move teeth exactly where the orthodontist would like; so elastics help with that movement.

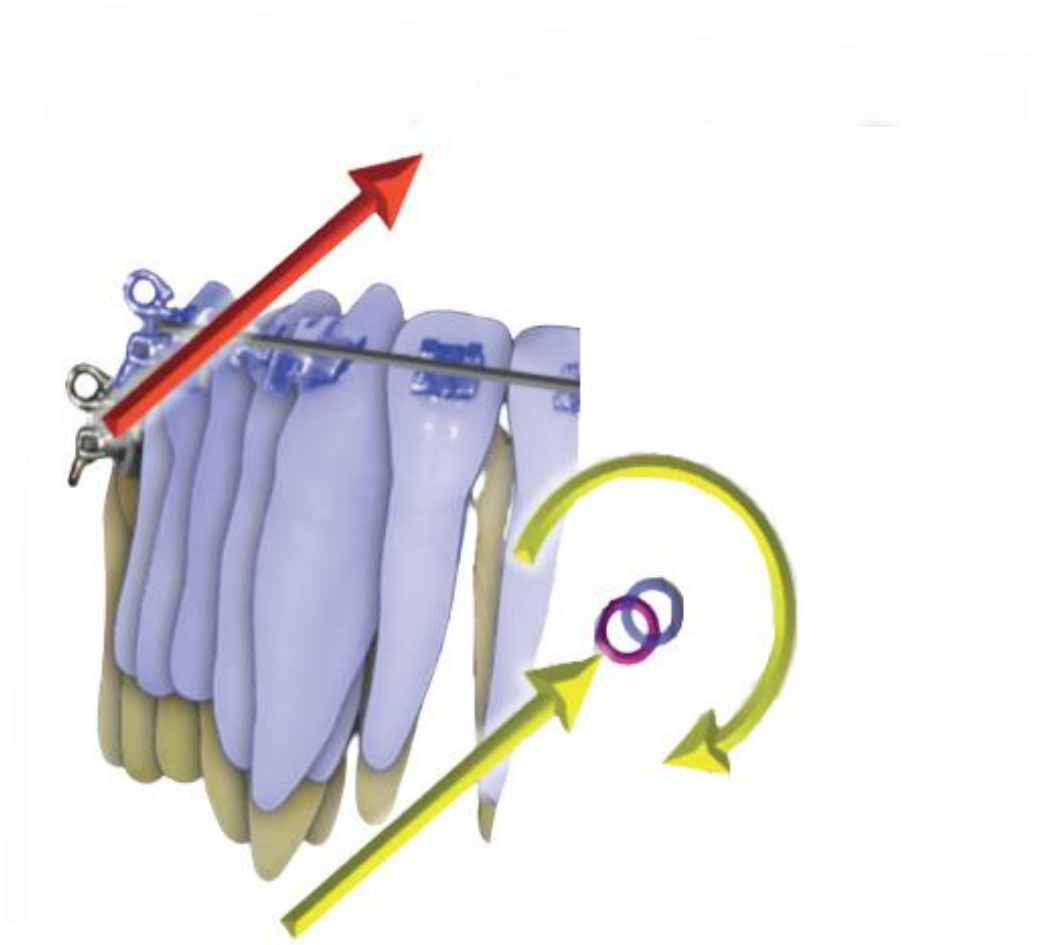
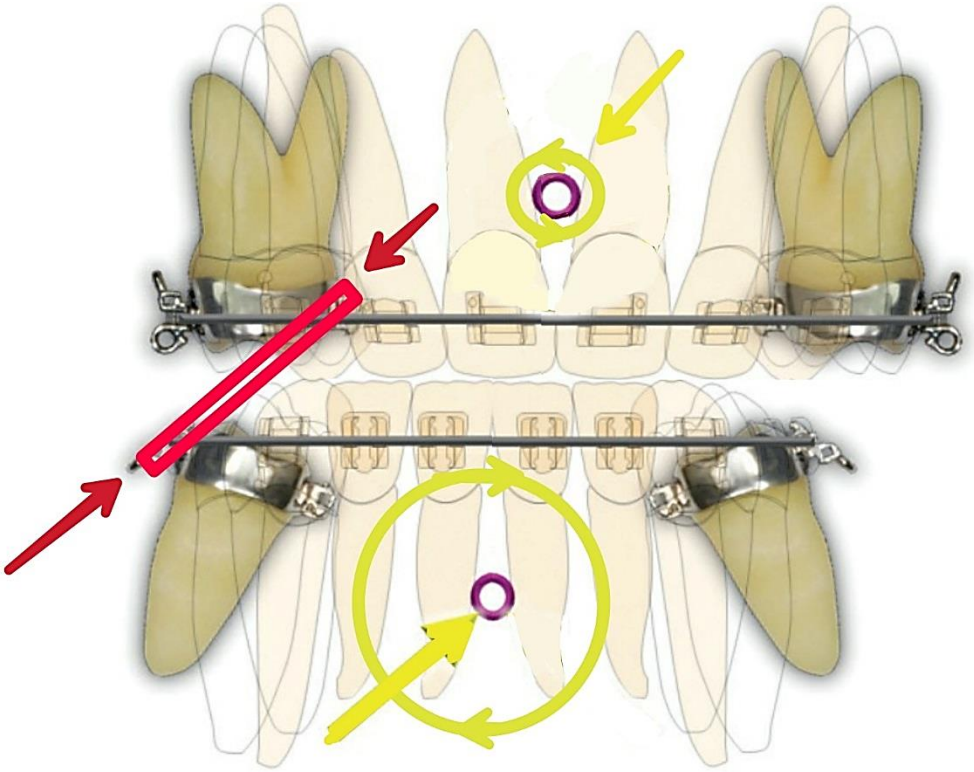


- ✓ **Why:** To correct posterior crossbites
- ✓ **When:** Initially or late in treatment
- ✓ **Force:** 3/16 inch; 6 oz
- ✓ **Time:** 24 hours per day

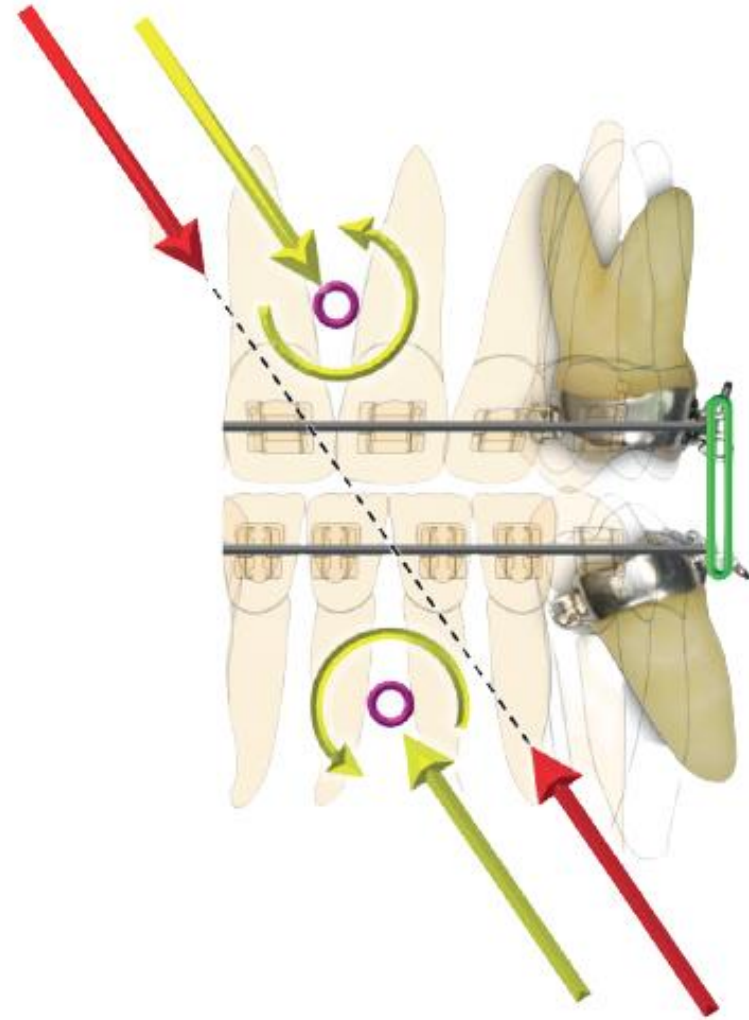
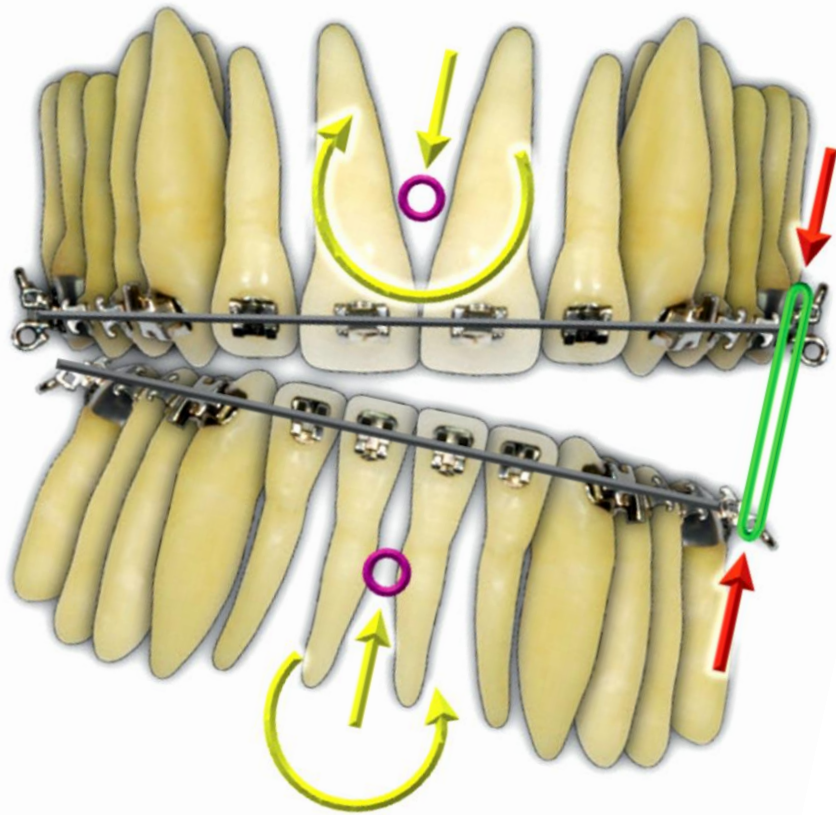




# Side Effect of a unilateral Crisscross Elastics on Heavy Gauge Wire



## To avoid this side effect

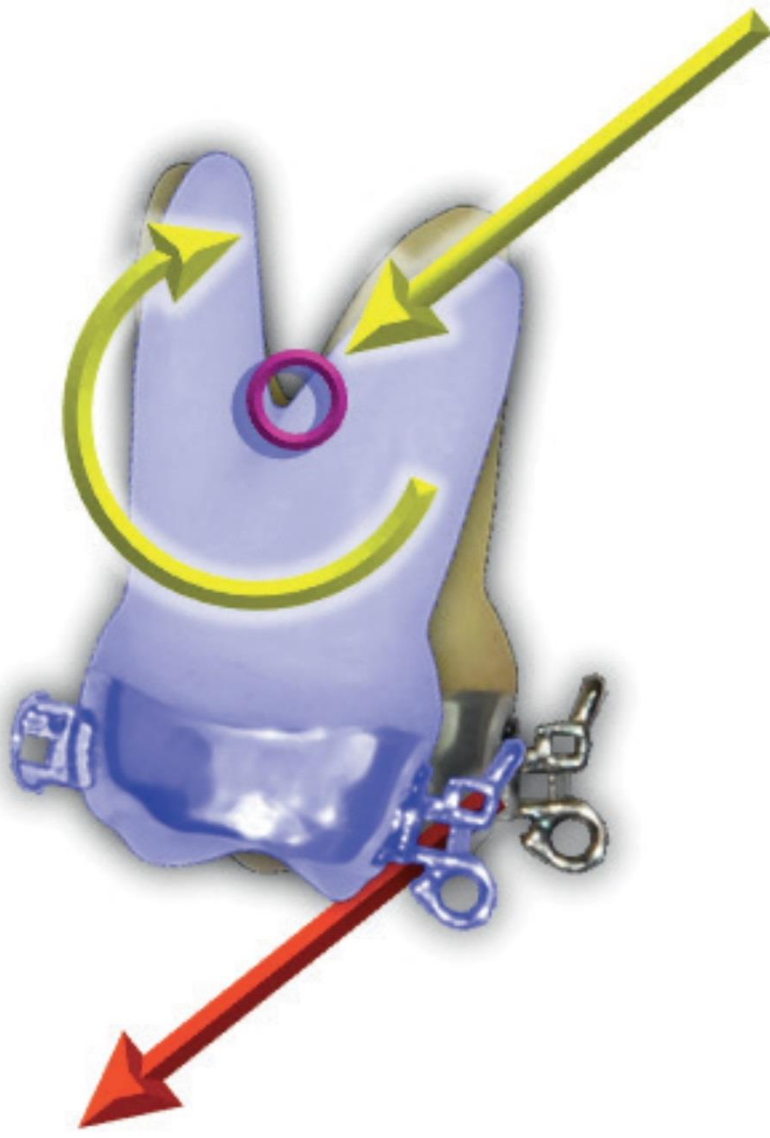


***OR***

**WE CAN USE THE CRISCROSS ELASTICS WITH THE  
INITIAL ARCHWIRE**

As recently, great attention has been given to “initial” elastics.  
That is, starting elastic wear in the initial wires in situations  
where a transverse correction is desired



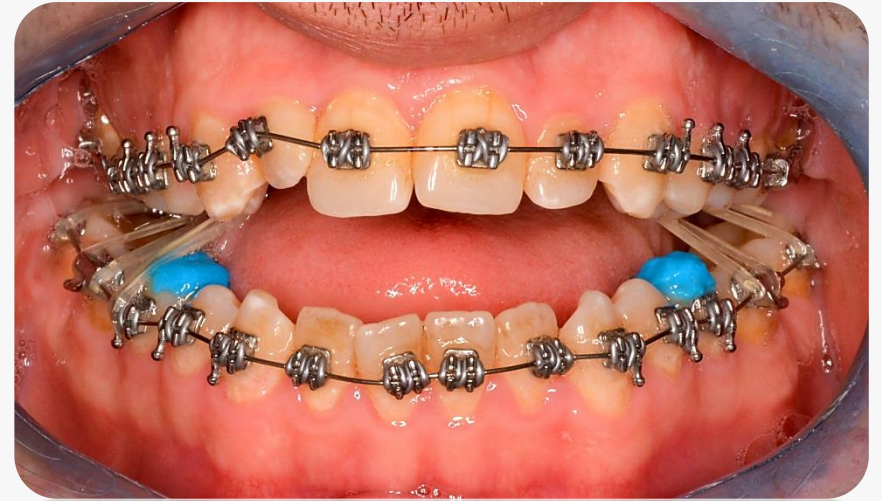


The background features a network of interconnected nodes and edges in shades of blue and white. On the left, there are large, overlapping geometric shapes in teal and light blue. On the right, there are similar shapes in a darker blue and purple hue. The overall aesthetic is modern and technical.

# Philosophy for Elastics

**Physiological adaptation**

- ✓ The light-force System allows the evident forces to dictate the ideal physiological arch form.
- ✓ Posterior expansion can be achieved without the use of mechanical expanders by adapting these forces and not overpowering the biomechanical system.
- ✓ The body's own physiology sets the course to a more biologically adaptive and biologically normalized result.



## Two important points need to keep in mind:



Using light elastics in order to not overpower the biological system.



Crossbite correction is also facilitated by disarticulation. By removing the occlusal forces on posterior teeth, greater freedom for lateral expression is achieved and ensuing transverse correction can be more readily attained.



## *Advantages of initial crisscross elastics*



Avoid the side effects  
of using crisscross  
elastics with the heavy  
gauge wire



Early correction of  
crossbite



Individualized  
correction



Faster treatment  
time

**01**

Patient  
compliance

**02**

Tenderness and  
Pain

**03**

If heavy force it  
may cause  
extrusion

***Disadvantages***



✓

# Cases

The following clinical cases show how very simple mechanics and this low-force system can achieve results that are beneficial to patients and clinicians.



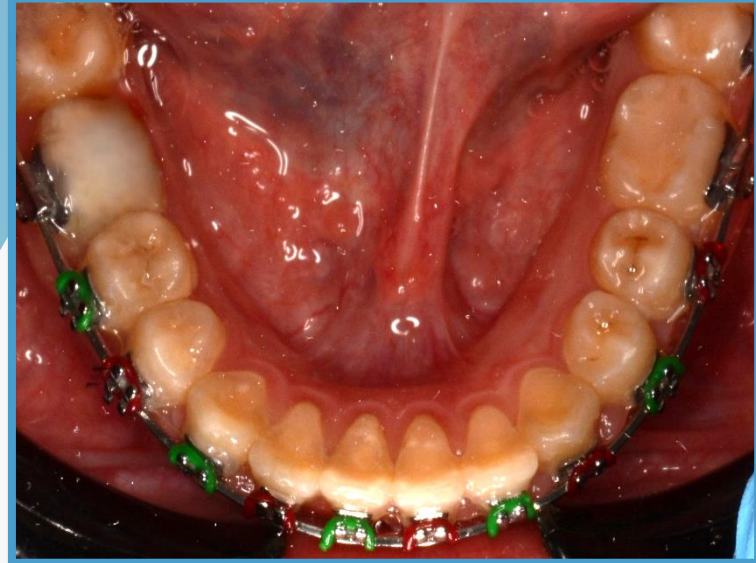
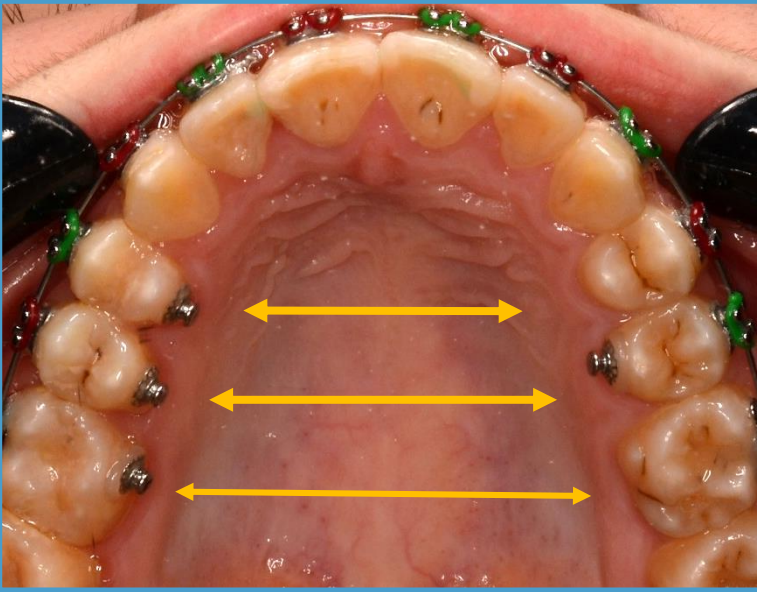
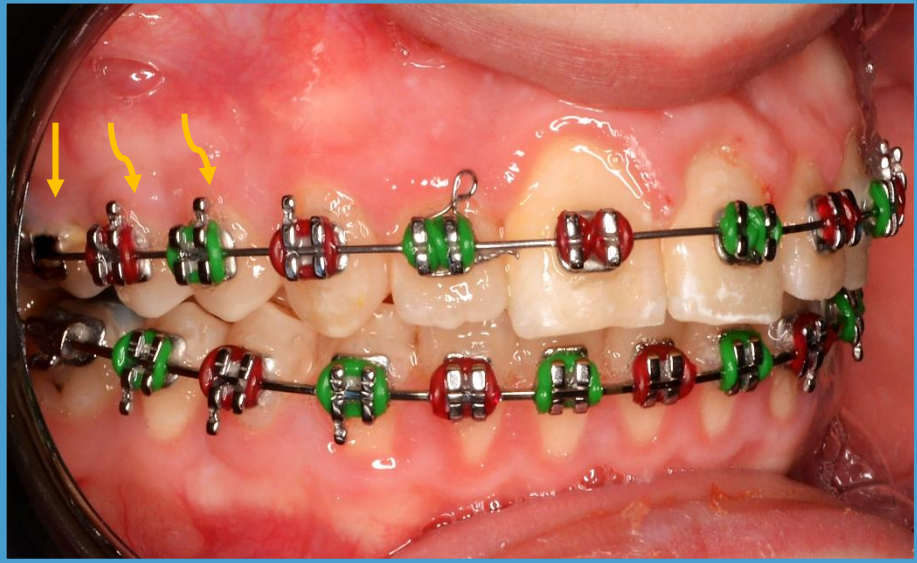
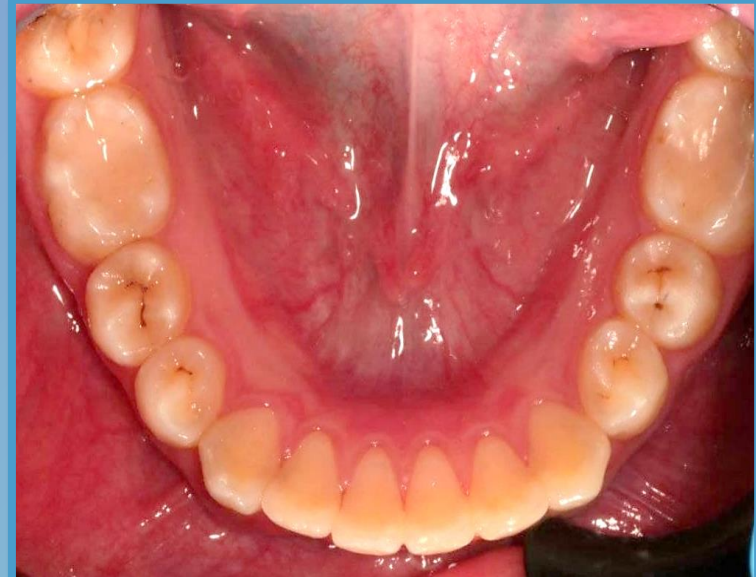
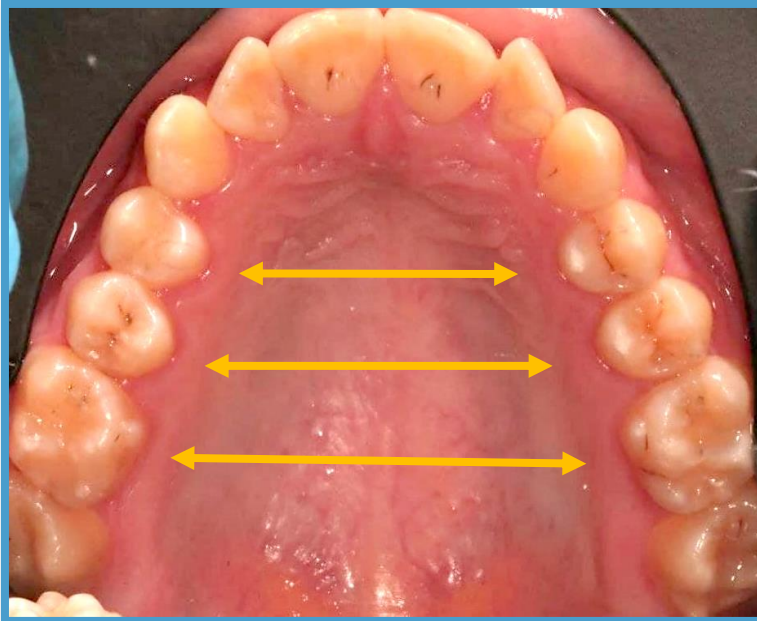
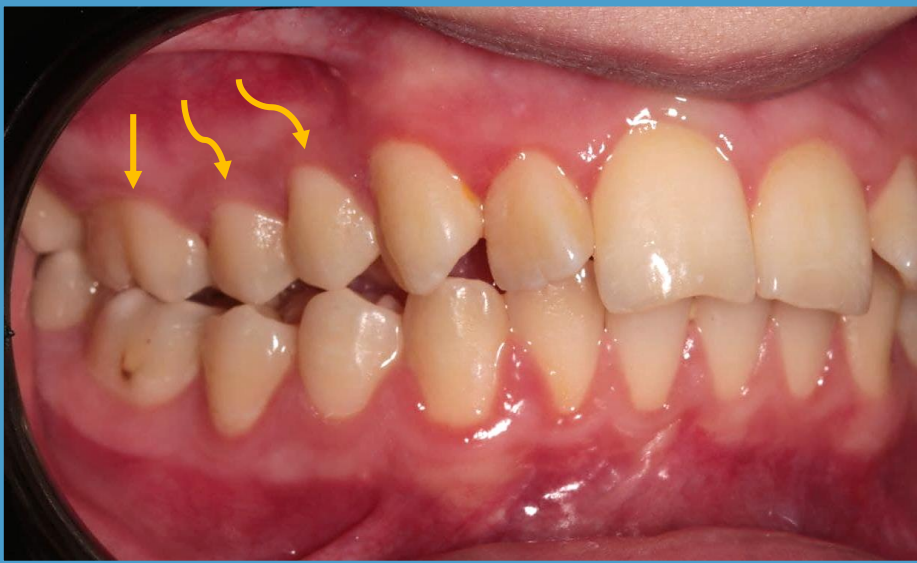
Maria



Batool

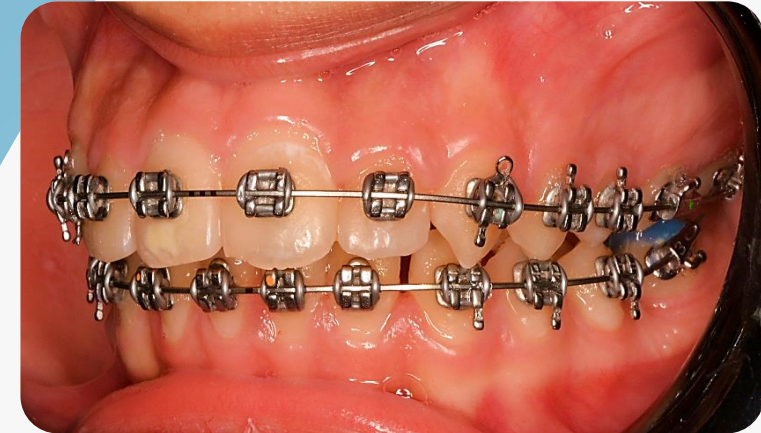


Hussain

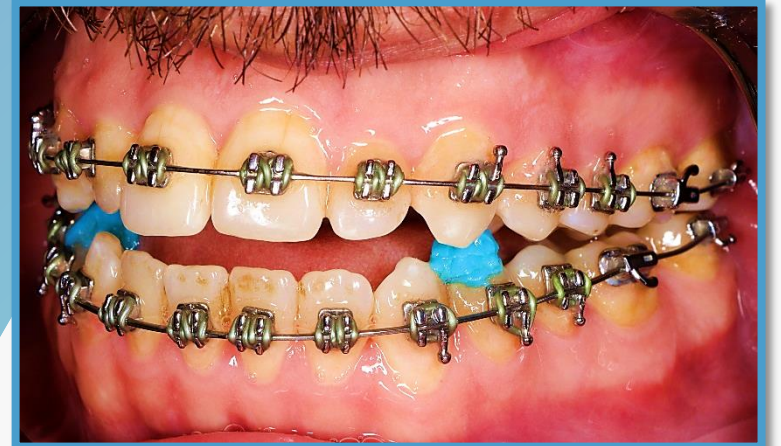
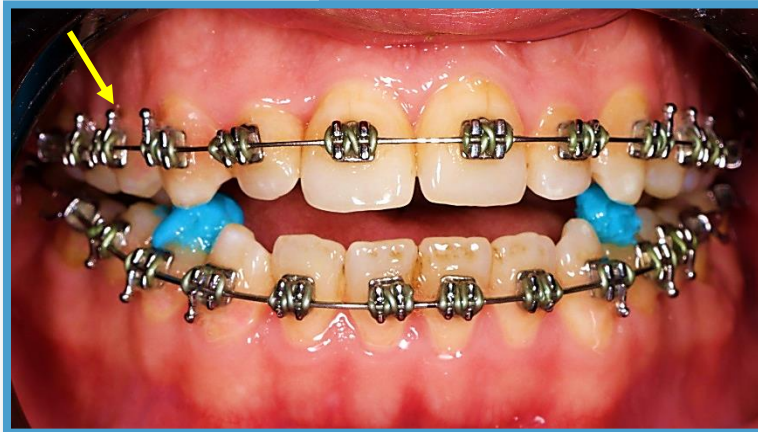
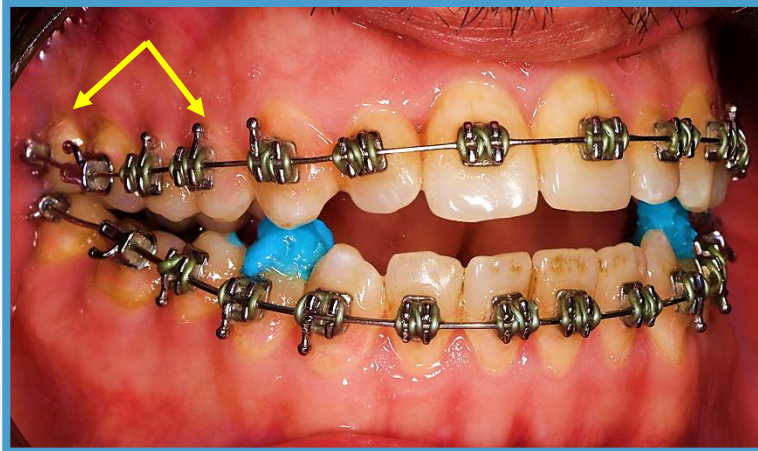
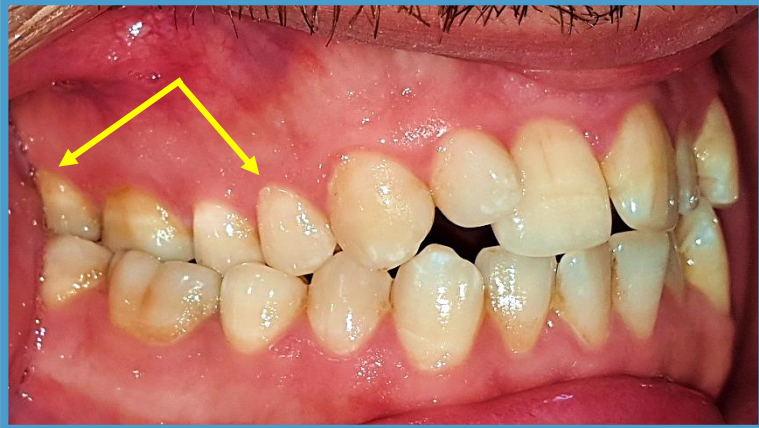




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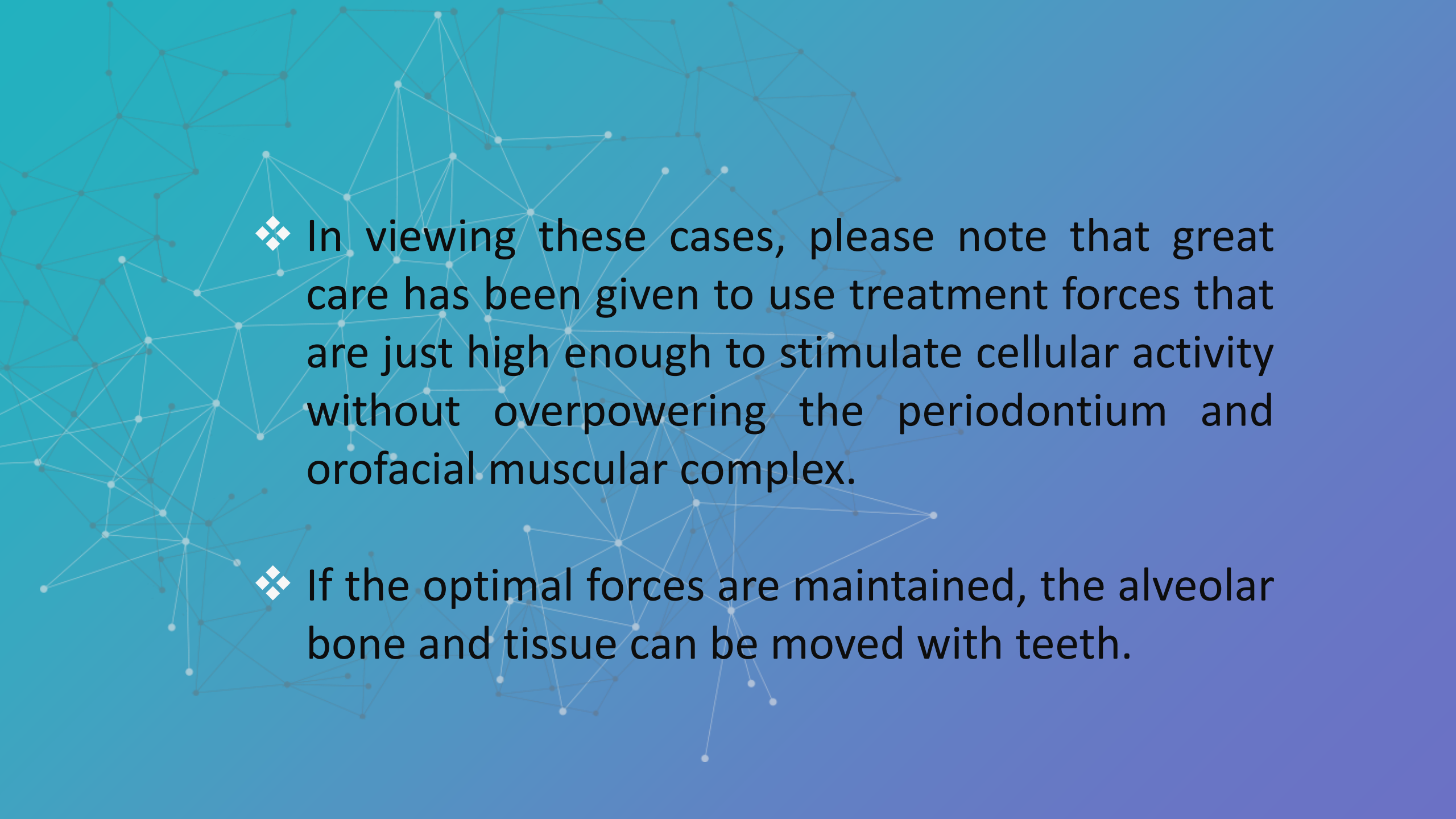


بعد 4 اشهر من بدء التقويم



The background features a complex network diagram with numerous nodes and connecting lines, set against a blue gradient. The nodes are represented by small circles, some of which are white and others are dark grey. The lines connecting them are thin and light grey, creating a web-like structure that fills the entire frame. The overall aesthetic is clean and modern, typical of a digital or communication theme.

# Home Message



❖ In viewing these cases, please note that great care has been given to use treatment forces that are just high enough to stimulate cellular activity without overpowering the periodontium and orofacial muscular complex.

❖ If the optimal forces are maintained, the alveolar bone and tissue can be moved with teeth.

The background features a complex network of interconnected nodes and lines, resembling a social or data network. The nodes are small circles, and the lines are thin, connecting them in a web-like structure. The overall color scheme is a gradient of blue, from a lighter teal on the left to a darker blue on the right.

Thank you