MECHANICAL STRATEGIES TO IMPROVE OPEN BITE TREATMENT STABILITY

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To use the mechanical strategies, we have to know the stability of each treatment approach in the different stages of the dentition:

1.- OPEN-BITE TREATMENT IN THE DECIDUOUS AND MIXED DENTITIONS

1.1.- Treatment with tongue crib or tongue spurs

1.2.- Treatment stability in the deciduous and mixed dentitions

Clinical stability is close to 100% (3, 4). Therefore, no additional special mechanical strategy is necessary.

2. OPEN-BITE TREATMENT IN THE PERMANENT DENTITION

2.1- Differential diagnosis

2.2- Open-bite non-extraction treatment

2.2.1- Stability of non-extraction open bite treatment

Clinical stability is of 61.9% (5, 6).

Therefore, the following mechanical strategies should be used to increase treatment stability:

a- Differentiated anterior bracket positioning – to allow overcorrection
b- Mesially angulated posterior teeth attachments

c- Concomitant use of palatal crib or tongue spurs during treatment

(4)

d- Active retention

(7, 9)

Retreat relapsed cases treated non-extraction, with extraction or surgical-orthodontically with occlusal adjustment

Decreases the clinical relapse
2.3- Open bite treatment with extractions

2.3.1- Stability of extraction open bite treatment

Clinical stability is of 74.2.9%\(^{(5, 10)}\).

Therefore, the same mechanical strategies mentioned should be used to improve stability.

2.3.2- Stability of Extraction versus non-extraction open-bite treatment

Extraction treatment is more stable than non-extraction treatment\(^{(11)}\).

2.4.- Open-bite correction with posterior teeth intrusion

2.4.1.- Stability of anterior open-bite treatment by posterior teeth intrusion

Molar intrusion has a relapse rate of 20 to 30%\(^{(12-14)}\).

Overcorrection is necessary, besides the other mechanical strategies mentioned.
2.5- Treatment of open-bite with occlusal adjustment

2.5.1- Stability of open bite treatment with occlusal adjustment

Clinical stability is of 66.7\%(9, 15).

3. ORTHODONTIC-SURGICAL TREATMENT OF ANTERIOR OPEN BITE

3.1. Stability of orthodontic-surgical anterior open bite correction

Clinical stability is of 82\%(5, 16).

Use the last three mentioned mechanical strategies and the most stable surgical approach to improve stability.
REFERENCES