

الإزاحة – Osteodistraction and Orthodontics

العظمية وتقويم الأسنان

1. Definition of Osteodistraction (Distraction Osteogenesis):

Osteodistraction is a surgical technique used to gradually lengthen bone by applying controlled mechanical forces after a surgical bone cut (osteotomy). New bone forms in the gap created as the bone segments are slowly separated.

2. Role in Orthodontics:

In orthodontics, osteodistraction is used to correct severe skeletal discrepancies, such as maxillary or mandibular deficiencies, especially in growing patients or cases where conventional orthodontic treatment is insufficient.

3. Types of Osteodistraction in Orthodontics:

Maxillary distraction

Mandibular distraction

Alveolar distraction (to aid tooth movement and space creation)

4. Advantages:

Allows large skeletal movements, improves facial esthetics and function, reduces the need for extensive orthognathic surgery, and can be combined with orthodontic treatment.

5. Disadvantages and Limitations:

Requires surgery, patient compliance, longer treatment time, and careful coordination between orthodontist and surgeon.

6. Conclusion:

Osteodistraction is an important adjunct to orthodontics for managing severe skeletal deformities, providing stable results when properly planned and executed.