

Accelerating Tooth Movement by altering Bone Biology – Is it possible and desirable?

- Dr. N.R. KRISHNASWAMY

- AAO study finds adults are seeking orthodontic treatment in record numbers.
- The reason for adults rejecting orthodontic treatment include:
 - Duration of Treatment
 - Poor esthetics during treatment
 - Difficulty wearing an appliance
 - Cost
- The rate of tooth movement is slow in adults compared to adolescents because their metabolism is much slower.
- Accelerating tooth movement can be achieved either by an adjunct procedure or by definitive procedure.
- By performing minor alveolar surgery, bone biology can be altered thus accelerating orthodontic tooth movement and this will diminish treatment time by 60-70% without compromising the treatment outcome.
- Definitive procedures include surgically facilitated technique which can be either an osteotomy or corticotomy.
- Osteotomy facilitated procedures are promising but very invasive.
- Corticotomy facilitated procedures are less invasive and effective.
- Corticotomy facilitated procedure can be used during different stages in orthodontic treatment namely aligning, space closure and finishing.
- The efficacy and treatment outcome of corticotomy assisted en-masse retraction was assessed in a randomized Clinical trial.
- The results indicate that corticotomy done prior to en-masse retraction of anteriors accelerates the space closure process and conserves anchorage.