

The Dynamic Orthodontic Treatment Envelope

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The envelope of discrepancy denotes the limits of orthodontic treatment possible with different modalities, namely orthodontics alone or orthodontics with orthopaedics and surgical correction. With the advent of TAD (Temporary anchorage devices), the possibilities of orthodontic treatment for the correction of various complex malocclusion has made a giant leap. This has added a new face to the envelope of discrepancy narrowing the gap between orthodontics and orthognathic surgical correction. Majority of the patient we treat in our dental office has a mild to moderate skeletal problem associated, what we usually call the "borderline cases", the treatment of such patient posed a serious headache to the treating doctor due to the natural compensation associated. These patients are difficult to treat as a camouflage will highlight the skeletal problem and a vast majority are not ready to undergo the trauma of orthognathic surgery. The dilemma of treating such patients has to a great extent benefitted with the introduction of TAD's. The TAD's can be either intraradicular or extraradicular. The benefit of using an extraradicular TAD in the form of an IZC (infra zygomatic crest) or buccal shelf is that augments greater range of tooth movement since it removes the root hindrance during tooth movement enabling total arch distalization and intrusions. Nowadays TAD's are widely used for orthodontic correction since it provides us with freedom for tooth movement in all planes of space eliminating the side effects involved. The main indication for such TAD's is in the treatment of mild to moderate gummy smile, vertical excess, molar protraction, class 3 skeletal conditions and skeletal expansion. The main reason for acceptance of such treatment protocol by the patient is the elimination of the surgical trauma involved. Patient compliance is absolutely necessary in terms of oral hygiene maintenance and regular scheduling of appointment in TAD treatment. Proper understanding of the biomechanics is absolutely necessary and the Tad's placement and force vector should be carefully planned for optimum results. But are TAD's an answer to all your skeletal problems? NO. The TAD's has their limit to orthodontic tooth movement beyond which surgical treatment has to be planned. So, a careful evaluation and diagnosis is a must before using the TAD's, for every orthodontic case for that matter.

The advent of TAD's has greatly revolutionized the way orthodontic cases are treated during the recent times and it has even introduced the dynamic concept for the orthodontic treatment envelope. TAD's are lethal weapons in the armoury of a clinician, when, where and how to use them ensure you a victory over the malocclusions you treat.

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