Solaze journal of Laser Dentistry

SOLAZE - *Journal of Laser Dentistry*

AN AID TO DECREASING ORTHODONTIC TREATMENT TIME - SOFT-TISSUE LASERS

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Abstract:

Impacted or partially erupted teeth, where bracket bonding and positioning are a challenge due to limited moisture control and the available tooth structure for bonding, prolong orthodontic treatment and exposure of such teeth using conventional means is associated with the use of local anaesthetics and blood. Such procedures not only decrease patient acceptance but also lead to frequent bracket de-bonding and an increased treatment time. These problems can be easily overcome with the use of soft tissue lasers for exposing the impacted teeth and increasing the clinical crown length of such teeth. The procedures are painless and bloodless which in turn increases patient acceptability and the operator efficiency, the predictability of the treatment done, decreases the chair side time and the overall treatment time.

Introduction:

In this era where everybody is in a hurry, the orthodontic patient also wants his / her treatment to get over faster. The various factors which affect treatment time have been very comprehensively been studied by Beckwith FR[1] et al and Dimitrios Mavreas and Athanasios E. Athanasiou[2]. Everything from the number of missed appointments, the number of replaced brackets and bands, the number of treatment phases, the number of negative chart entries regarding oral hygiene, and the prescription of headgear wear during treatment, extraction Vs non-extraction, impactions, surgical phases etc have been studied at length.

The various authors agree that frequent bracket de-bondings increase treatment time[1], non-extraction treatment is shorter[2] and the newer self-ligating brackets decrease chair-side time[3,4] and also the over-all treatment time[5]. Since only those teeth can be moved on which orthodontic brackets are bonded, it is pertinent to involve the erupting and the impacted teeth as early as possible into the orthodontic appliance. This is where the 812 nm diode lasers play an important role. These lasers are capable of exposing the erupting teeth bloodlessly and rather painlessly without the use of the painful and at times fearful injections and provide the right

Fig 1a - Adequate space created for partially erupted mandibular right canine

Fig 1b - 812nm soft tissue laser used to increase the length of the clinical crown.