

**The Effect of Using Two Different Suturing Techniques on
Free Gingival Marginal Stability after Esthetic Crown
Lengthening for Treatment of Gummy Smile
(Randomized Clinical Trial)**

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Dedication

To my beloved family

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List of Abbreviations

- Cementoenamel junction = CEJ
- Recurring Esthetic Dental Proportion = RED
- Vertical maxillary excess = VME
- Altered passive eruption = APE
- Junctional epithelium = JE
- Supracrestal connective tissue attachment = SCTA
- Randomized controlled clinical trial = RCT

Introduction

Research agree that attractiveness ratings is consistent even among different cultures, suggesting a core human perception of what constitutes beauty(*Bernstein.et al 1982*).In the face, the mouth resembles nearly third the importance of the hierarchy of factors which determine whether a person is judged to be attractive (*Goldstein et al. 1969*). For patients esthetics are of grave importance and with the prevalence of gummy smile different treatment options were improvised depending on the principle of predictable periodontal plastic surgery (PPS) procedures proposed by Garber & Salama.

Gummy smile is caused by different etiological factors; the most common cause is altered passive eruption. Altered passive eruption has been classified into two distinct types. In type I, the excessive amount of gingiva is measured from the free gingival margin to the mucogingival junction. In type II, there is a normal amount of gingiva when measured from the free gingival margin to the mucogingival junction. Although the appearance is similar therapeutically the diagnosis between the two types is essential to determine the appropriate treatment modality.

Type I can be subdivided on an anatomical histological basis into sub-categories A and B. This subclassification depends on the relationship of the osseous crest to the cementoenamel junction of the tooth. In subcategory A, the dimension between the level of the cementoenamel junction and the osseous crest is greater than 1 mm, which is sufficient for the insertion of the connective tissue fibrous attachment component of the biological width.

In subcategory B, bone sounding via the sulcus is done in which, the osseous crest occurs in close proximity to the cementoenamel junction, thereby diminishing the space for insertion of the connective tissue of the biological width. The biological width, which consisting of the junction epithelium, the connective tissue fibrous attachment and the sulcus, is considered to be the major parameter which implies that the biological width should not be violated by restorative endeavors.

Based on early studies, the average dimensions of the biological width were considered to be approximately 2.7 mm -about 1 mm for the junctional epithelium, 1 mm for the connective tissue attachment and 1 mm for the sulcus. Clinically, we have found this to be a more varied dimension often exceeding the 3 mm average (*David et al.1996*)