

Co relation between labial marginal bone thickness and soft tissue thickness in the anterior maxilla -A Novel CBCT assisted analysis.

Purpose of Study

A thin tissue biotype is always prone to tissue recession post implant placement. Seibert, Lindhe ,Bengazi (1989)

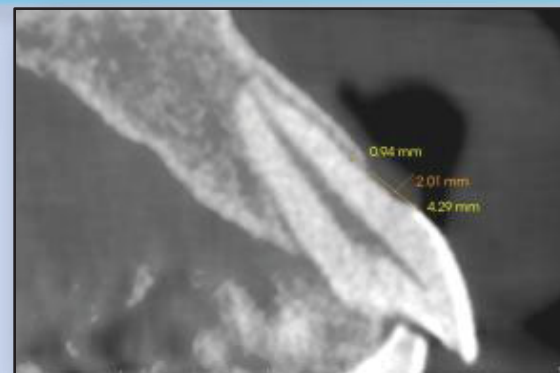
The purpose of this study is to explore the co-relation of the labial bone thickness to the marginal soft tissue thickness in the anterior maxilla in *thin tissue biotype* situations.

Inclusion Criteria

- No history of or presence of periodontal disease
- Non smoker
- No medical history
- Absence of any anterior fixed prosthesis
- No advanced carious lesions
- No tooth fractures
- Patient with CBCT scan for the purpose of future therapy.



Clinical Picture of the area of examination



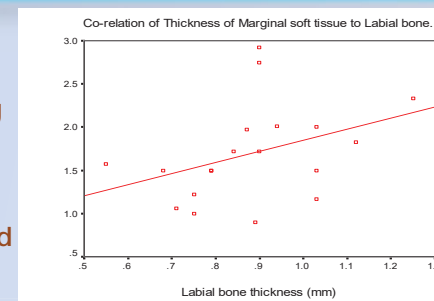
CBCT data was acquired to measure crestal bone thickness and thickness of the overlying gingiva. (Fu ,2010)

Methodology

Results

	N	Minimum	Maximum	Mean	Std. Deviation
Age (yrs)	19	19.00	58.00	45.42	13.829
Thickness of marginal soft tissue(mm)	19	0.90	2.92	1.69	0.552
Thickness of labial bone thickness (mm)	19	0.55	1.25	0.88	0.166
Distance from CEJ to Alveolar crest (mm)	19	1.14	5.47	3.09	1.196
RATIO of Marginal soft tissue to Labial bone	19	1.01	3.24	1.94	0.601

Scatter plot showing the relationship between the thickness of marginal gingiva and labial cortex



Conclusion

A simple linear regression was conducted to note effects of hard tissue parameters on soft tissue thickness.

No significant correlations were noted.

Age, Crestal Bone Level(CBL) as well as *Bone Tissue Thickness(BTT)* on the *buccal* aspect **failed to predict** gingival soft tissue thickness. As these CBL and BTT are commonly noted variables during volumetric radiography; any notable effect on soft tissue thickness may aid in predicting risk of marginal recession.

Hence, factors other than Crestal Location and Thickness are likely to determine soft tissue thickness and need further study