

Thesis Title	Efficacy and Safety of Dual Frequency Ultrasound for Facial Lifting
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ABSTRACT

Background: Dual frequency ultrasound is the ultrasound using 2 different frequencies with a quick frequency modulation. This causes micro massage effect which decreases matrix metalloproteinases enzyme activity which mainly takes part in collagen degradation. Moreover, this effect also stimulates heat shock protein synthesis, anti-inflammatory effect and skin barrier recovery.

Objective: The objective of this quasi-experimental, clinical study was to evaluate the efficacy and safety of dual frequency ultrasound for facial lifting.

Methods and materials: Subjects 25 to 45 years of age (n=20) with mild to moderate facial skin laxity were recruited. The ultrasounds 1/3 MHz and 3/10 MHz were applied to face for 24 minutes. It is done 2 times per week for 6 weeks. The follow up visits were 4th week, 8th week and 12th week after last treatment session.

Result: Wrinkle score at baseline was lower than 4th week (-8.706) and 8th week (-10.00) statistically significant at the level of 0.05(p<0.05). The mean of cutometer score (skin elasticity) in each visit statistically significant increased. The sebumeter and tewameter scores are improved with each visit at the level of 0.005. There was no adverse effect in all subjects throughout the study.

Conclusion: Based on these results, wrinkle and skin elasticity are improved with time to time compared to the baseline. The dual frequency ultrasound's face lifting result remains the same for 12th week. Moreover, Sebumeter and Tewameter scores, are decreased over time throughout the treatment which demonstrated that dual frequency ultrasound can also decrease sebum production and make the skin more hydrated.

Keywords: Dual Frequency Ultrasound, Face Lifting, Skin Elasticity, Wrinkle

