

Thesis Title	Comparison of Hyaluronidase Injection in Combination with Non-Invasive Focused Ultrasound Versus Ultrasound Alone for Thigh Fat Reduction
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ABSTRACT

This research has the purpose of studying the effectiveness in the reduction of thigh fat accumulation by using the technique of hyaluronidase injection in combination with non-invasive focused ultrasound which will help break down fat. Moreover, the drug helps to drain fat out through the vascular and lymphatic systems. It is a new way to solve the problem of thigh fat accumulation. This method will help increase the efficacy of treatment without any serious complications by comparison with the existing treatment.

The present research started from bringing together participants in the research project who experienced problem of thigh fat accumulation totaling 18 persons by being treated with the method of hyaluronidase injection in combination with non-invasive focused ultrasound and the use of ultrasound alone on each side of the thighs continuously. The treatment was performed 3 times in total, with a one-month interval between each treatment and follow-up of treatment through assessment by measuring the thickness of fat layer with ultrasound and the thigh circumference with a standard tape measure. The comparison was made in relation to the periods before treatment and after treatment for 1 month and 3 months.

The study results show that hyaluronidase injection in combination with non-invasive focused ultrasound is more effective in reducing thigh fat accumulation than the use of ultrasound alone significantly at one and 3 months from both the measurement of fat thickness (p-value < 0.001) and the measurement of thigh circumference (p-value = 0.006). It was found that the side effects caused by treatment are just minor. According to the assessment, most participants in the research have been also satisfied with the treatment method.

In conclusion, hyaluronidase injection in combination with non-invasive focused ultrasound can reduce thigh fat accumulation at a level greater than the use of ultrasound alone with statistical significance. It was found that the side effects are just minimal. Therefore, it may be another alternative of localized fat reduction.

Keywords: Thigh fat/Hyaluronidase/Non-invasive focus ultrasound