

Acne Treatment Using a Combination Acupuncture and Fractional Laser

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Abstract

Introduction: Acne is a health problem that is often experienced, especially in adolescents and young adults. Acne can cause self-doubt and affect a person's quality of life. **Objective:** The purpose of this study is to explore the effectiveness of a combination of acupuncture and fractional laser therapy in treating acne problems. This study will collect data from respondents who have acne and see the results of their treatment using a combination of acupuncture and fractional laser therapy. **Method:** The research method used by the author is a quantitative experimental design with a pre-post-test design. **Result and Discussion:** The results of this study will assist in understanding the effectiveness of combined acupuncture and fractional laser therapy in the treatment of acne and provide recommendations for clinical practice. The results showed that the use of acupuncture and fractional laser combination therapy in acne cases showed significant changes. **Conclusion:** The GAGS score before therapy was at the severe level, changing to mild, and some were in the none category or completely cured, so that it can be concluded that this combination therapy can be an effective therapy for acne cases.

Keywords: Acupuncture; Acne; Fractional Lasers;

Introduction

Acne (acne vulgaris) is an inflammatory condition of the oil (sebaceous) glands of the skin that causes red spots, pus, and swelling to appear (Ravisankar et al., 2015). Acne is a common skin problem experienced by many people, especially teenagers and young adults. Acne can cause aesthetic problems and affect a person's level of confidence (Putri, 2018). Some of the standard treatments for acne, such as topical and systemic medications, can have side effects and are not effective for all individuals (Fox et al., 2016). Four pathogenesis factors cause acne: increased sebum production, hyper keratinization, *Propionibacterium acne* bacteria, and inflammatory reactions (Seth & Mishra, 2015)

Acupuncture is an alternative medicine technique that originated in China and is based on the principle that energy, or Qi," flows through the body through pathways or meridians (Saras, 2023). Acupuncture uses fine needles placed at specific points to help improve Qi flow and treat health problems. If the flow of Qi is disturbed, it will cause health problems. Acupuncture can help treat a variety of health problems, including skin problems like acne (Ma & Sivamani, 2015). Several studies have shown that acupuncture can help reduce the severity of acne and improve skin quality. Acupuncture can help with acne problems by stimulating the immune system and improving blood flow and metabolism. Acne occurs due to inflammation of the sebaceous glands (Zhang et al., 2023)

According to traditional Chinese Medicine (TCM), the sebaceous glands are related to the lungs and spleen. The lungs act as a defense known as wei to ward off external pathogens. The spleen functions as a transformer and transporter of nutrients from processed food (Mansu, 2019). If there is an accumulation of heat in the stomach and intestines, it can go up, injure the lungs, and manifest on the skin, causing the skin to become red and papules to appear. Spicy and oily foods have hot properties; if consumed in excess, they can interfere with the function of transportation and transformation of the spleen and can cause fire as a result of accumulated heat (Yin & Zenghua, 2000). Treatment of acne in Chinese Medicine can be done with acupuncture therapy, herbs, and nutritional arrangements (Cao et al., 2015). Acupuncture in the treatment of acne cases functions to balance the organs associated with acne, expedite the Qi of the organs that are not smooth, expedite stagnation, and eliminate heat and moisture that cause acne.

Dermatologist Dr. Sarah Smith (Dahan & Pusel, 2015), state fractional laser is a dermatological treatment method that uses lasers to create micro-holes in the skin, improving texture and minimizing signs of aging. Fractional lasers can also be used to treat skin problems such as acne. In her journal, rai and natarajan states that laser or light-based tools can be an alternative to conventional acne modalities for certain respondents, such as those who do not respond, are not compliant, or are resistant to antibiotics (Rai & Natarajan, 2013)

According to Michael H. Gold, the main advantage of fractional lasers is that only a small portion of the skin is affected, while about 15 to 30 percent of the skin surface is effectively treated. This allows the skin to heal itself more quickly than if the entire skin

surface were treated. A faster healing process also means a lower risk of complications and side effects (Gold, 2010)

To treat acne, treatment with acupuncture and fractional laser are two types of alternative therapies that have proven effective for treating skin problems. However, the combination of these two therapies has not been scientifically studied for its effectiveness in treating acne, so this study aims to prove that treating acne with acupuncture and fractional laser is proven to be beneficial.

Method

This study used a quantitative experimental method with pre- and post-design observations. Researchers will make observations before and after therapy. The acupuncture points used were Hegu (LI-4), Zusanli (ST-36), Fenglong (ST-40), Sanyinjiao (SP-6), Shang Wan (CV-13), Zhongwan (CV-12), Guan Yuan (CV-4), Yin Tang, Tai Yang, Ju Liao (ST-3), and Quan Liao (SI-18). After the acupuncture therapy session, if the acne condition is not so active, fractional laser therapy will be carried out for 1 session in 4 weeks.

The GAGS scale is used to measure the severity and outcome of therapy, which is measured every time a patient undergoes fractional acupuncture and laser therapy. The GAGS scale has a level of 0 = None, 1–18 = mild, 19–30 = moderate, and 31–38 = severe. GAGS is a quantitative scoring system for assessing the severity of acne. This system was first developed by Doshi and colleagues in 1997 (Chilicka et al., 2022). The research sample consisted of five people with acne complaints.

Result and Discussion

Result

The level of acne is measured using the GAGS scale, along with the results of therapy using acupuncture and fractional laser:

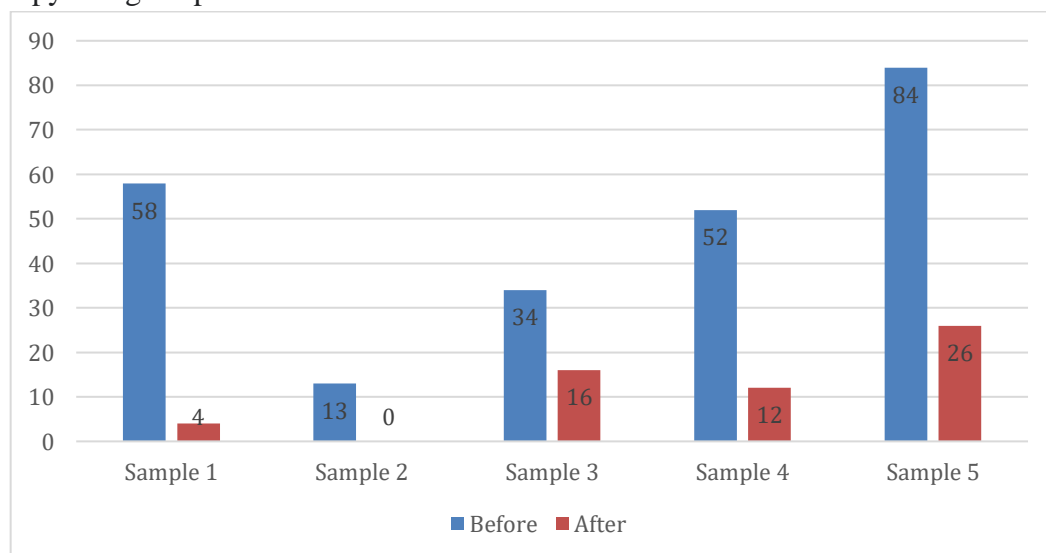


Figure 1. The results of reducing the GAGS scale

The five samples are aged 20–25 years. Of the five samples, only sample number 2 has a mild GAGS scale category with a score of only 13, while the others are included in the severe GAGS scale category, with the highest score of 84 suffered by sample 5. The five samples have dulled facial colors, acne, large pores, and lots of acne scars. The sample has a red and yellow tongue coating. All samples have the same syndrome, namely moist heat in the stomach and spleen. The type of therapy that is carried out for all individuals is the same, namely to expel dampness and soothe the stomach and spleen, reducing the GAGS scale.

Discussion

Figure 1 shows a decrease in the GAGS scale. In Figure 1, all samples experienced very significant changes after the last session for everyone. The average individual who has a severe GAGS category experiences improvement to mild. Whereas in sample 2, patients experienced a complete recovery from acne cases with a GAGS scale score of 0 or in the none category. The average decrease in the GAGS scale of all clients is 78.40%, which also indicates that this combination therapy is very effective in cases of acne.

The decrease in acne cases is due to the accuracy of the use of acupuncture points. The point used for this study is the Hegu point (LI-4), a point where energy collects to increase Qi circulation in the Yangming meridian. The large intestine has an external and internal relationship with the lungs, and the Hegu point (LI-4) is useful for regulating Qi. The Zusanli point (ST-36) is the He point of the stomach and regulates the stomach and intestines, tonifies Qi, expels phlegm and dampness, increases Yang, and is good for the spleen and stomach.

Zusanli point (ST36) is used for repairing the spleen and stomach and promoting Qi and blood. Fenglong point (ST-40) to expel phlegm. Shang Wan (CV-13) is an acupuncture point located between the navel and the tip of the sternum (xiphoid). Located on the Conception Meridian, this point is also used to treat digestive disorders such as nausea, vomiting, and stomach disorders. Zhongwan (CV-12) is in the middle of the distance between the navel and the sternum, that is, the middle sternum. Also, a point on the Conception Meridian, Zhongwan is used to treat digestive problems such as bloating, stomach pain, nausea, and vomiting (Kie Jie, 2010).

Guan Yuan (CV-4) is in the middle of the line connecting the navel and pubic bone. This point is also included in the Conception Meridian and is used to increase vital energy, strengthen the immune system, and regulate the menstrual cycle. Yin Tang is the extra point located in the middle of the line that connects the two eyebrows at the top of the nose, between the foreheads. Although not included in the main meridians, Yin Tang is very useful for dealing with problems of stress, anxiety, insomnia, and headaches. Tai Yang is an extra point located at the temple area, in front of the ear, just below the thumb bone. This point is used to treat headaches, migraines, eye problems, and conditions around the face such as trigeminal neuralgia.

Ju Liao (ST-3) is in front of the ear, on the lower jaw, in front of the mucous pouch of the mouth. As a point on the Stomach Meridian, Ju Liao is often used to treat

toothaches, mouth sores, vision problems, and other facial conditions. Quan Liao (SI-18) is in front of the ear, in front of the jaw joint, under the cheek. This point on the Great Intestinal Meridian, Quan Liao, is used to treat problems such as toothaches, vision problems, and other facial conditions.

The Sanyinjiao point (SP-6) is the meeting point of three Yin meridians of the feet, which function to strengthen spleen Qi, improve Qi circulation, activate blood circulation, and promote menstruation. Sanyinjiao point (SP-6) can expel moisture (QI, 2012). The combination of the points above is proven to be able to treat acne by expelling moisture and heat and calming the stomach and spleen organs so that acne is reduced.

The use of fractional lasers has proven successful in overcoming acne complaints. Fractional lasers work by breaking down damaged skin tissue and triggering the production of collagen, which helps improve skin texture and reduce the severity of acne. This technique can also help treat infections and reduce oil buildup on the skin, which are major factors that exacerbate acne problems.

Fractional lasers are proven to be safe and effective and can produce significant results in a short time. Fractional lasers stimulate the production of new collagen in the skin, which helps repair and regenerate damaged skin tissue. The results of this treatment can be an improvement in skin texture, a reduction in wrinkles, the healing of scars, and a general improvement in the appearance of the skin.

Conclusion

Research shows that combination therapy with acupuncture and fractional laser results in significant improvements for individuals suffering from acne. The GAGS score, which was initially severe, changed to mild, and some even recovered completely or were in the none category. Acne combination therapy uses LI-4, ST-36, ST-40, SP-6, CV-13, CV-12, CV-4, Yin Tang, Tai Yang, ST-3, and SI-18 points, which, in combination with laser Fractional therapy, have proven effective in dealing with acne cases.

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