

Application of New Acupuncture and Moxibustion Technology in Acne

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Abstract: *Acne is a common aesthetically damaging skin disease at present, with a high incidence rate, complex etiology, and serious symptoms, usually manifested as blackhead or white head acne, inflammatory papules, secondary pustules, nodules, cysts, and even scars on the face, chest, back, etc. At present, acupuncture and moxibustion treatment of acne has obvious curative effect, small side effects and few sequelae. Its mechanism may be related to anti-inflammatory effects, regulation of sex hormones and endocrine levels, promotion of skin toxin metabolism, and enhancement of immunity. Therefore, this article reviews the application of new acupuncture and moxibustion technology in acne in recent years, and expounds its mechanism, hoping to provide new ideas and reference for everyone in clinical treatment of acne.*

Keywords: Acupuncture, Acne, New technique.

1. Introduction

Acne, also known as "acne", is a chronic inflammatory skin disease that occurs in the hair follicles and sebaceous glands [1]. Due to acne being a cosmetic disease, it can also have an impact on the psychological well-being of patients [2]. There are various methods for treating acne in Western medicine. Currently, medication and laser therapy are the main methods, and the treatment effect is prone to recurrence and drug resistance. Acupuncture and moxibustion, as a commonly used non drug therapy in traditional Chinese medicine, is one of the important means to treat acne. It is widely used in clinic because of its green, safe, simple, practical, convenient and inexpensive advantages. Facial acupuncture, autologous platelet rich plasma therapy (PRP), plain gold needle and diamond auricular plaster are all new acupuncture and moxibustion techniques in recent years. They have the advantages of quick onset, green safety, small side effects, and are gradually recognized and accepted by patients. Therefore, this article mainly introduces the application of these new acupuncture and moxibustion techniques in acne and expounds their mechanism, hoping to provide new ideas and references for everyone in the clinical treatment of acne.

2. Western Medicine's Understanding of Acne

Western medicine believes that the pathogenesis of acne is due to the vigorous secretion of male hormones during adolescence, excessive secretion of sebaceous glands, blocked hair follicles, and the proliferation of acne bacteria. Androgens can play an important role in the pathogenesis of acne by promoting the proliferation and abnormal differentiation of sebaceous gland cells, promoting the secretion and release of pro-inflammatory factors, promoting abnormal keratinization of hair follicle sebaceous gland ducts, and mediating autophagy inhibition of sebaceous gland cells [3]. Propionibacterium acnes can promote sebum secretion, stimulate excessive keratinization of keratinocytes, exacerbate inflammation, and lead to the formation of acne, papules, and pustules [4]. Under the influence of androgens, the sebaceous glands of hair follicles increase in size, leading to excessive sebum secretion and the production of thick and

abundant sebum, but it cannot be completely excreted [5]. At the same time, androgens can also cause keratinization of the sebaceous gland ducts, and the shedding epithelial cells on the hair follicle wall mix with sebum to form cheese like substances, blocking the hair follicle opening and forming acne. However, due to the complex etiology of acne, the exact pathogenesis is currently unclear [6]. However, traditional Chinese medicine had a comprehensive and profound understanding of the etiology and pathogenesis of acne thousands of years ago, and guided its clinical application.

3. The Traditional Chinese Medicine's Understanding of Acne

In the long history of the development of traditional Chinese medicine, there are different records of acne. For example, "acne", "flour residue", "alcohol residue", "facial blisters", etc [7]. Acne was first recorded in the book "Su Wen · Qi Tong Tian Lun", which states: "Sweating can cause dampness, which leads to acne and heat rash. The transformation of Gao Liang can cause the growth of large intestines in the feet... Sweating is like the wind, cold and thin become the skin, and depression is like acne [8]". In addition, classical medical books such as "Treatise on the Origins of Various Diseases" and "Essential Knowledge" have recorded and discussed acne. However, based on the summary of classical medical literature, the overall etiology and pathogenesis of acne can be condensed as follows: wind heat external attack, muscle surface depression; Lung and stomach heat accumulation, with excessive blood heat; Damp heat accumulates, phlegm and blood stasis coagulate [9]. With the development of modern medicine, modern doctors have gained their own understanding of the etiology and pathogenesis of acne. But it is basically no different from ancient literature records, and it is believed that the onset of acne is nothing more than evil factors such as wind, dampness, heat, and poison.

Modern research suggests that the mechanism of acupuncture treatment for acne is more likely related to its regulation of the hypothalamic pituitary gonadal axis (HPGA) to maintain dynamic balance, thereby regulating sex hormone levels. The new techniques of acupuncture and moxibustion in the

treatment of acne are discussed one by one.

4. Application of New Acupuncture and Moxibustion Technology in Acne

4.1 Facial Acupuncture (Mainly Targeted at Stage One and Stage Two Acne)

Facial acupuncture refers to a new type of needle specifically used for facial treatment. Facial acupuncture therapy refers to the method of using specially designed facial needles to penetrate facial acupoints or certain areas, achieving the effects of unblocking meridians, regulating qi and blood, regulating heart and concentration, etc., in order to treat beauty damaging diseases. The Yellow Emperor's Inner Canon records that "one intends to use micro needles to penetrate their meridians, regulate their blood and qi, and honor their ability to enter and exit in a reverse and smooth manner [10]". It means using a small needle to pierce the skin, achieving the purpose of unblocking meridians, harmonizing blood and qi, and promoting the circulation of qi and blood in the meridians to achieve a coordinated effect of reverse flow. The nerves and blood vessels in the head and face are the most abundant, and the facial skin is delicate and prone to bleeding, forming bruises and affecting aesthetics. To do a good job, one must first sharpen one's tools. Facial acupuncture is a micro needle developed based on millineedles, combined with the characteristics of facial anatomy and physiology, and the high requirements for facial acupuncture in clinical practice. Its specifications mainly include 0.10 * 15mm, 0.12 * 15mm, 0.14 * 15mm, 0.16 * 15mm, etc., with diameters ranging from fine to coarse from 0.10mm to 0.16mm. Facial acupuncture treatment for acne mainly involves surrounding and scattered needling. Before needling, the depth of the lesion should be determined. Generally, acne that occurs on the epidermis and dermis should have a needling depth of 2-3mm. For severe acne, it may be accompanied by pustules, nodules, scars, etc. At this time, the lesion is located in subcutaneous tissue, and the needle tip needs to reach the base of the acne [11]; The specific operation is to select the most severe acne by first piercing it directly in the center, then encircling it with it as the center [12], and finally scattering the needle between other acne based on the area of the acne. The needle insertion method is to push and twist the needle, and the needle insertion and operation are integrated. During this period, the needle cannot be inserted, and the needle is left for 1 hour. When the needle is released, the needle should be slowly withdrawn and pressed for 1-2 minutes to prevent bleeding and the formation of subcutaneous hematoma. Modern research [13] has shown that facial acupuncture can unblock the local meridians of acne, regulate qi and blood, accelerate local metabolism, narrow the scope of acne in a short period of time, and control its further development; And it can accelerate skin metabolism and deep toxin excretion by establishing a large number of skin microvascular channels [14]. In summary, facial acupuncture is mainly used to treat the first and second stages of acne. At this time, its clinical manifestation is chronic follicular sebaceous gland inflammation, with a shallow location and heat toxin blocking the meridians. Facial acupuncture has a good therapeutic effect.

4.2 Plain Gold Needle Therapy

Plain gold needle is a new type of leather needle made from gold needle and coated with a layer of gold foil on the outside of the needle body. The plain gold needle therapy originates from the Yellow Emperor's Inner Canon. It is a method of treating diseases by using tweezers to pierce acupoints or certain parts, and by floating and shallow needling of acupoints to regulate the body's external defense function by regulating the Wei Qi [15]. After needling with plain gold needles and using magnetic pole needles, it can have the effects of anti-inflammatory, anti itching, filling acne pits, and removing acne marks. Its commonly used specifications are 0.12 * 3mm and 0.12 * 6mm. It is exquisitely crafted and sharp, with minimal needle pain and high patient acceptance. The treatment of acne with plain gold needle mainly involves scattered needling. The specific operation is to select the areas of acne scars and pits for scattered needling, use magnetic poles to awaken the acupoints every 15 minutes, leave the needle for 1 hour, and use clean forceps for needle insertion and exit to avoid infection caused by hand contact. The treatment frequency is twice a week, with one course of treatment per month. The plain gold needle used in the treatment of acne is the needling method of "calming and leaving the needle" in "Suwen · Lihe Zhenxie Lun" [16], which is a specific application of the combination of skin theory and acupoint theory. It can provide long-term needle retention, is safe and convenient, painless, has the effect of regulating menstruation and luck, and calms the mind and helps sleep [17]. When a plain golden needle is inserted into an acupoint, it can stimulate nerve endings to generate excitement, which can reach the central nervous system through the conduction of nerve segments, thereby activating neural regulation. Modern research has shown that the treatment of acne with plain gold needles can reduce the levels of dihydrotestosterone in patients [18] and serum testosterone [19]. In summary, acne patients who are afraid of needles, have facial itching, and have left acne pits and marks can choose plain gold needles for treatment.

4.3 Autologous Platelet Rich Plasma Therapy

PRP, also known as platelet rich plasma, is a plasma product rich in high concentrations of platelets prepared by centrifugation of fresh anticoagulant whole blood [20]. PRP is considered safe and natural because it comes from autologous sources, requires minimal preparation, has a lower risk of infection transmission, and has no immunoreactivity [21]. PRP is rich in many growth factors, inflammatory regulatory factors, fibrin, bacteriostatic proteins, and white blood cells, which can promote tissue repair and regulate inflammation [22]. Therefore, PRP therapy can not only treat acne but also improve the skin's own treatment response after acne scar treatment [23, 27]. The specific operation of PRP treatment for acne is as follows: in a Class III medical environment (clean treatment room), instruct the patient to take a supine or sitting position, fully expose the elbow median vein, and after routine disinfection, extract 10ml of blood. Then, put the extracted blood into a centrifuge, and after centrifugation is completed, extract the PRP into the injection needle [24]. Disinfect the patient's bilateral Zusanli, Quchi, and Xuehai, and inject the same ml of PRP. After the needle is removed, press the needle hole, Advise patients to rest carefully [25]. Li Xiaoyan et al. [23] randomly divided 74 patients with sunken acne scars into two groups. The control group was treated

with roller microneedle combined with PRP, while the observation group was treated with gold microneedle radiofrequency combined with PRP. The results indicate that the combination of gold microneedle radiofrequency and PRP can significantly improve acne scars, while reducing adverse reactions, and can play a safe and efficient clinical role. Foreign studies have shown that the use of platelet rich plasma (PRP) can accelerate the healing process and collagen synthesis, so PRP can be used to treat atrophic acne scars caused by acne vulgaris [26]. In summary, the autologous platelet rich plasma therapy technology is novel and is gradually being applied in the field of traditional Chinese medicine beauty.

4.4 Diamond Ear Point Patch Therapy

Diamond ear patch is an improvement on the original ear patch, which uses crystals instead of Wangbuliu Xingzi to stimulate the ear acupoints and treat diseases [27]. Ear acupoints are a microcosm of the human body's holographic effect on the ears, and stimulating them can indirectly adjust the function of the organs. Modern medicine believes that the auricle and its surroundings are rich in nerves and blood vessels, where the vagus and sympathetic nerves of the body intertwine and coincide. Therefore, stimulating the ear can regulate the autonomic nervous system of the cerebral cortex through different nerve conduction systems, thereby playing a role in treating diseases [28]. The specific operation method for treating acne with diamond ear acupoint patches is to instruct the patient to take a sitting or supine position, perform routine disinfection on the acupoints, and then apply diamond ear acupoints to the ear acupoints endocrine, lung, cheek, subcortical, sacral, adrenal, and stomach for pressure. 3-4 acupoints are selected for pressure each time, and then they are pressed. It is advisable for the patient to have a feeling of soreness in the ear, and the two ears are alternated, twice a week, and one month is a treatment course [29]. Research has shown that ear acupoint pressure has anti-inflammatory, anti-allergic, endocrine regulating, and reduced androgen secretion effects [30]. In summary, compared with traditional ear patches, diamond ear patches not only enhance stimulation intensity, but also have advantages such as aesthetics and waterproofing. It can significantly improve the symptoms of acne vulgaris skin lesions, treat the disease while also taking into account the patient's psychology, improve the patient's quality of life, and have cumulative effects and good long-term efficacy [31].

5. Conclusion

Traditional Chinese medicine has a comprehensive and comprehensive understanding of the etiology and pathogenesis of acne, and has always guided clinical practice. Acupuncture and moxibustion has been trusted by patients for its definite efficacy and small side effects in the treatment of acne. In recent years, the cause of traditional Chinese medicine has developed steadily and continuously, and acupuncture and moxibustion technology has also followed the trend of the times, kept pace with the times, and continued to develop and innovate. At present, the new acupuncture and moxibustion technology that has emerged is gradually applied to the field of traditional Chinese medicine beauty, and has achieved good clinical efficacy and feedback, especially in the

treatment of acne. However, they are high-tech technologies that conform to the trend of the times and are injected into acupuncture and moxibustion, so they also face some confusion and challenges. The traditional Chinese medicine mechanism of acupuncture and moxibustion in the treatment of acne has been very clear, while the western medicine mechanism is still not perfect and is still in the stage of continuous research. This requires the use of modern medical research methods, from endocrinology, immunology, molecular biology and other aspects of a more in-depth study of the mechanism of acupuncture and moxibustion new technology to treat acne. Looking at the current development trend of acupuncture and moxibustion technology, we have reason to believe that there will be more new acupuncture and moxibustion technologies in the future under the collision of ancient Chinese medicine books and high-tech, and contribute to the field of Chinese medicine beauty.

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