

Systematic Review – Physiotherapy and experimental acupuncture effects on the skin

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Abstract

In the 20th century, acupuncture, which has been used for thousands of years in China and other countries of the Far East, is widely used in modern medicine as a method of treatment or general condition in chronic diseases, as well as as an additional physical therapy to support the main therapeutic methods. Chinese medicine, and acupuncture in particular, continues to gain popularity in Europe, the United States, and around the world. In recent years, which is one of the reasons for our struggle to clarify the morphological basis of this ancient healing method. Physical therapy is treatment using physical means that include heat, light, electricity, water, movement, ultrasound, magnetism, etc. During all treatments with Chinese and classical medicine, morphological changes of the skin are possible, in which the lesions that appear are not permanent and only a small percentage remain longer. The treatment is generally safe to use in terms of morphological skin changes. If the acupuncture stimulation is performed with a larger dose, it leads to larger changes in the skin at the molecular level, with a very low possibility of structural changes. There are many cases that prove and show the fact that acupuncture and other Chinese medicine treatments help to heal and improve the condition of the skin. If acupuncture is not performed by professionals with appropriate education, serious mistakes can occur.

Keywords: acupuncture, physical therapy, review, effects

Introduction

Acupuncture is part of Chinese traditional medicine that has developed over the centuries based on the Chinese philosophical tradition.

Acupuncture is mentioned in ancient China as early as 2800 BC. - Huang Ti, the Yellow Emperor (2698-2596), was the first author of the Nei Qing, the oldest medical work in the world, which was transcribed in 475. BC, reached our days. This book mentions nine types of needles, as well as indications and contraindications for the use of acupuncture. Acupuncture arrived in Europe in the late 16th and early 17th centuries after the visit of Jesuit missionaries to China, and it is interesting to note that the first doctoral dissertation in the field of acupuncture was defended in 1682 in London. At the Health Medic polyclinic.

According to Chinese philosophical thought, the world is subject to constant changes and transformations, every phenomenon has two faces, everyone has two genders that are in a constant dynamic relationship, this universal principle is expressed through the theory of Yin and Yang. According to traditional Chinese medicine, man is made of matter and energy Chi (chi). Chi is the universal energy of life that permeates all cells and tissues in the body and activates all life activities.

Disturbed harmony in the relationship between Yin and Yang, that is, disorders of the vital energy Chi lead to the appearance of various symptoms, i.e. diseases. Therefore, the main task of acupuncture and other areas of traditional Chinese medicine (tuina, Qi Gong, phytotherapy, cup suction, moxibustion) is to restore the disturbed balance and correct the energy imbalance, thus achieving the desired therapeutic effect.

Yang: day, sun, above, outside, bright, active, warm, masculine and Yin: night, moon, below, inside, dark, passive, cold, feminine.

In the 20th century, acupuncture, which has been used for thousands of years in China and other countries of the Far East, is widely used in modern medicine as a method of treatment or general condition in chronic diseases, as well as as an additional physical therapy to support the main therapeutic methods. In our country, this therapeutic method was introduced in the second half of the last century. [1]

Chinese medicine, and acupuncture in particular, continues to gain popularity in Europe, the United States and around the world in recent years, which is one of the reasons for our struggle to clarify the morphological basis of this ancient healing method. In Europe, the United States, and around the world, Chinese medicine, particularly acupuncture, is gaining popularity, with accredited higher education programs offering the title of Doctor of Traditional Chinese Medicine and Acupuncture, in contrast to physiotherapy, which typically requires three years of education.

Physical therapy is treatment using physical means that include heat, light, electricity, water, movement, ultrasound, magnetism, etc.

The goal of this therapy is the removal of toxic substances from the tissues, better and easier transport of nutrients between cells and cell membranes, reduction of inflammatory processes, reduction of pain, increase of protective power and general toning of the body. 90% of all Chinese and physical medicine treatments are done through the skin. The first medium of contact is the skin. The skin is the most exposed organ to any external influences and external factors. Changes in skin pigmentation are a common effect of aging. Moles, freckles and lentiginosae are flat brown spots about 5 mm in diameter. They are a risk factor for melanoma, but none of these skin changes have been reported to be physically related trauma or mechanical stimulation. In Traditional Chinese Medicine (TCM), these dark spots on the face or head are associated with blood stagnation, which in turn is caused by Qi deficiency, which is a result of the aging process. TCM aspart, is a treatment that involves inserting needles into specific points on the body surface, called acupuncture points, by penetrating the epidermis, dermis, subcutaneous layer or muscles. Serious side effects from acupuncture treatment are rare. Less serious side effects,

including dizziness, pain, fatigue, and bruising, are uncommon. When administered by a qualified Doctor of Traditional Chinese Medicine and Acupuncture who accurately applies acupuncture points, there are typically no negative effects associated with acupuncture treatment.

The aim of the study is to see published articles and results about possible morphological changes from physiotherapy and acupuncture treatment, to determine which are the most common changes and which treatments occur more often. In all treatments with Chinese and classical medicine, morphological changes of the skin are possible, and the lesions that appear are not permanent and only a small percentage remain longer. The treatment is generally safe for use in morphological skin changes. If the acupuncture stimulation is performed at a higher dose, it results in greater changes in the skin at the molecular level, with very little possibility of structural changes. The disturbed balance and to correct the energy imbalance, thus achieving the desired therapeutic effect.

Yang: day, sun, up, out, bright, active, warm, masculine

Yin: night, moon, down, inside, dark, passive, cold, feminine

At an interregional seminar in December 1979 in Beijing, the World Health Organization (WHO) published an indicative list based on clinical experience of indications for acupuncture-related diseases.

The following are listed from the group of neurological and musculoskeletal diseases:

- Headaches
- migraine,
- Trigeminal neuralgia,
- Peripheral paralysis / paresis n. facialis,
- Paralysis/paresis after cerebrovascular stroke,
- Peripheral neuropathies,
- Consequences of poliomyelitis (early conditions up to 6 months),
- Meniere's disease,
- Neurogenic disorders of urination, enuresis,
- Intercostal neuralgia,
- Cervicobrachial syndrome,
- Frozen shoulder syndrome
- "Tennis elbow" syndrome
- Sciatica,
- Lumbago - lumbar pain,
- Osteoarthritis.

Contraindications:

- States of extreme weakness - energy,
- Acute drunkenness,

Acute psychosis,

- Extreme excitement,

- Immediately after radioactive irradiation,
- After high doses of corticosteroids and psychopharmaceuticals,
- Patients with an implanted pacemaker (for electroacupuncture)
- Acupuncture should be avoided during pregnancy, during menstruation, and immediately after large meals. [2]

According to recommendations published by the WHO, the specified diagnoses are treated effectively by a Doctor of Traditional Chinese Medicine and Acupuncture who utilizes accurate acupuncture points for treatment.

Material and methods

The systematic review of the literature available to us shows that the research is to inspect the published articles and results for possible morphological changes from the treatment with physiotherapy and acupuncture, to establish which are the most common changes and which treatments occur more often.

Results and discussion

During all treatments with Chinese and classical medicine, morphological changes of the skin are possible, in which the lesions that appear are not permanent and only a small percentage remain longer. The treatment is generally safe to use in terms of morphological skin changes. If the acupuncture stimulation is performed with a larger dose, it leads to larger changes in the skin at the molecular level, with a very low possibility of structural changes.

Serious side effects from acupuncture treatment are rare. Less serious side effects, including dizziness, pain, fatigue, and bruising, are uncommon but this belong to normal reaction. [3] Acupuncture can only be practiced by doctors who adhere to the Guidelines on basic training and safety in acupuncture published by the World Health Organization, as well as the law of Complementary and Alternative Medicine issued in Official Gazette of the Republic of Macedonia. These regulations, which implement WHO guidelines, are prepared by qualified doctors and establish the standards for Traditional Chinese Medicine and acupuncture. [16] [17] It is also necessary to adhere to the decision of the Medical-Expert Council on TCM, which stipulates that acupuncture should be administered by a qualified doctor of traditional Chinese medicine and acupuncture, possessing extensive experience working with patients and conducting a large number of scientific research studies with a high impact factor. [18]

Physiotherapy therapy includes a variety of treatments, including electrical stimulation, manual therapy, kinesiography, laser therapy, and similar. Manual therapy may show mild to moderate side effects after practicing some techniques, but these usually disappear within 24 hours and these effects are either neck/back pain from headaches. None showed morphological skin changes. [5]

Acupuncture, as part of TCM, is a treatment that involves inserting needles into specific points on the body's surface, called acupuncture points, by penetrating the epidermis, dermis, subcutaneous layer, or muscles. The therapeutic effects of acupuncture treatment

are induced by needle insertion or manipulation, so it is suggested that the intensity of acupuncture stimulation may enhance its therapeutic efficacy. [4]

Skin pigmentation after electroacupuncture or acupuncture in patients is not common. A study was published that reported a case series, including four cases of short-term and long-term skin pigmentation with dark spots after repeated strong electro-acupuncture or acupuncture stimulation. In all four cases, pigmentation occurred after prolonged treatment. The skin changes gradually faded and remained almost unnoticeable after one month, and in two cases the pigmentation decreased in size and color intensity by more than 50% in two years. The authors argue that skin pigmentation is likely to be a specific consequence of needling and is closely related to acupuncture dose, whether the stimulation is delivered manually or by electro-acupuncture. [6]

Another study showed a case where repeated pinning of the Yin Tan point was performed over a period of 6 years and was found to cause changes in skin texture and pigmentation. Other cases reported changes in pigmentation but were shorter and associated with strong needle stimulation. As a possible cause, the author states that this may be due to the patient's intermittent bleeding at the Yin Tang acupuncture point for 6 years, which may have caused adhesions that blocked the smooth flow of blood and Qi at the acute point. Given the fact that the patient already had a state of Qi and Blood stagnation, she could be prone to Qi and Blood stagnation in any part of the body. [3]

In one case, the pigmentation was caused by a silver needle implanted for 10 years, which developed a change in pigmentation that mimicked a blue mole. [3]

In a study of giant anteaters, nerves and connective tissue were found to be the main histological structures found in regions of acuton transposition, as suggested by other studies, arguing that the main histological component of the acuton is nerve. Based on the results, neurovascular bundles likely function as a morphological substrate and some form of information transfer to and from acupuncture points. [7] Similar to another human study, it was found that during visceral disorders there are neurogenic spots that are activated by activation of somatic afferents and are located in the same anatomical locations as traditional acupuncture points. They have been shown to exhibit mechanical hypersensitivity. reveal high electrical conductivity and are consistent with the physiological characteristics of acupuncture points. [8]

In a study comparing the effects of a surface-modified nanoporous acupuncture needle with a conventional needle, it was found that the nanoporous needle induced greater mechanical stress than the conventional one; also, nanoporous needling treatment resulted in greater morphological changes in the thickness of the muscle layer around the needle track compared to conventional needling treatment; and at point ST36 leads to a longer duration of the analgesic effect and long-term efficiency of the treatment compared to conventional acupuncture. Morphologically, the conventional acupuncture needle rotation technique induces folding of collagen in the subcutaneous connective tissue without structural changes in the muscle layers. Acupuncture performed with a

nanoporous needle results in bending of both subcutaneous connective tissue and muscle, so morphological changes are relatively minimal. [4]

In a case study involving a 68-year-old woman suffering from lower back pain and sciatica, symptoms improved after acupuncture treatment. The findings show that there is mass formation like chronic inflammatory granuloma due to acupuncture treatment. [9]

In the other report, acupuncture-related skin adverse events were subcutaneous hematoma, skin bruising, bleeding, and pain at the needle site. The most common side effects are subcutaneous hematoma and needle hemorrhage. However, the final conclusion is that acupuncture is a safe treatment with a low risk of adverse events in clinical practice. [10]

There are many cases that prove and show the fact that acupuncture and other Chinese medicine treatments help to heal and improve the condition of the skin. An experimental study on psoriasis lesions showed that acupuncture, electroacupuncture, and fire acupuncture improved skin lesions, inhibited keratinocyte proliferation, reduced epidermal thickness, and CD3 + T cell infiltration. These acupuncture techniques also reduce inflammatory cytokine secretion. [11]

98% of the results found for the study show that acupuncture actually helps with morphological skin changes and that it is very rarely the cause. In general, reported skin side effects are of minor importance.

Physiotherapy is generally an effective treatment and some side effects are considered as totally normal and part of the treatment as soreness or muscle fatigue, increased pain, bruising, swelling and other similar.[12]

A study has reported that adverse events after manual therapy are common including soreness, stiffness and increased pain. Women reported more side effects than men. 51% of the patients, who received at least 3 treatments, reported experiencing at least 1 adverse event after one or several visits. [13]

In a study done for electrotherapy, out of 200 patients, 87 reported having local effects such as rashes, burns and increased pain and 98 patients reported having general effects such as vertigo and nausea. [14]

If acupuncture is not performed by professionals with appropriate high qualified education, serious mistakes can occur. The WHO guidebook is considered appropriate education. [15] [16]

Conclusion

In all treatments with Chinese and classical medicine, morphological changes of the skin are possible, and the lesions that appear are not permanent and only a small percentage remain longer. The treatment is generally safe for use in morphological skin changes. If the acupuncture stimulation is performed at a higher dose, it results in greater changes in the skin at the molecular level, with very little possibility of structural changes. Adverse skin reactions associated with acupuncture events are subcutaneous hematoma, skin bruising, bleeding, and pain at the needle site. The most common side effects are subcutaneous hematoma and needle hemorrhage. However, the final conclusion is that

acupuncture is a safe treatment with a low risk of adverse events in clinical practice. [10] Acupuncture can only be practiced by doctors who adhere to the Guidelines on basic training and safety in acupuncture published by the World Health Organization, as well as the law of Complementary and Alternative Medicine issued in Official Gazette of the Republic of Macedonia. These regulations, which implement WHO guidelines, are prepared by qualified doctors and establish the standards for Traditional Chinese Medicine and acupuncture. [16] [17]

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