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Academic Debate

Dry needling: a de-meridian style of acupuncture

干针——“去经络化”的针灸

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ABSTRACT

Recently, the educators of Dry Needling (DN) in the West often proclaime that DN is not acupuncture, and thus DN practitioners do not need to have the same training as acupuncturists. Their primary reason is that DN does not use the meridian theory of traditional Chinese medicine (TCM). In this paper, the authors refuted this claim. Through a systemic review on the global “Acupuncture Fever”, there are several different manifestations of “De-Meridian” phenomena (meridian theory is not required for acupuncture and other related modalities). Although De-Meridian has played a positive role in the development of acupuncture, it does not mean “De-Acupuncture” (modalities derived from but different from acupuncture). Given the clear definition of acupuncture by WHO, even though DN has certain attributes of De-Meridian that is similar to other forms of novel needling therapies, all of them belong to acupuncture. DN is a style of contemporary acupuncture, also called Trigger points (TrPs) acupuncture. This is because not only these myofascial TrPs stimulated by DN have always been acupoints, the needles and techniques used in DN are no different than acupuncture. Moreover, the mechanisms of DN and acupuncture are one in the same. The development of modern DN theory and its application are closely associated with the clinical trials and research of acupuncture. On the other hand, researches and clinical applications on myofascial TrP have highlighted the importance of stimulating reflex points in the clinic. However, as it refuses to inherit the theory and experience from thousands of years of acupuncture practice, it has shown obvious shortcomings in clinical applications.

KEY WORDS: dry needling; trigger point; acupuncture; de-meridian; de-acupuncture

In the past few years, dry needling (DN) is a form of acupuncture being increasingly taught and practiced in the West. However, DN educators proclaim that “DN is not acupuncture”. The primary reason is that “the objectives and philosophy behind the use of DN by physical therapists is not based on ancient theories or tenets of traditional Chinese medicine (TCM)”, and that “the performance of modern DN by physical therapists is based on western neuroanatomy and modern scientific study of the musculoskeletal and nervous systems”[1-2]. In other words, DN educators try to distinguish DN from acupuncture due to their notion that “the meridian theory, the basis of traditional acupuncture is not used as the guidance of DN”. DN practitioners believe they do not need to be bound by regulations of acupuncture and obtain necessary training required for acupuncturists.

In this paper, the authors refute the above claim by distinguishing the concept of “De-Meridian” (where the meridian theory is not required for acupuncture and other related modalities) from “De-Acupuncture” (modalities derived from but different from acupuncture). Although the De-Meridian movement may have played a certain positive role in the development of acupuncture during the modern

era, including recent "Acupuncture Fevers (AF). De-Meridian is not equivalent to De-Acupuncture. Even though DN has some attributes of De-Meridian like other forms of contemporary acupuncture, DN is still in the scope of acupuncture, which is supported by multiple evidence including the official definition of acupuncture by WHO. Moreover, DN, also called Trigger points (TrPs) acupuncture, has brought forth the importance of stimulating reflex points in clinical contemporary acupuncture. However, as DN refuses to inherit the theory and experience from thousands of years of acupuncture practice, it has shown obvious shortcomings in clinical applications.

THE DE-MERIDIAN PHENOMENA DURING "ACUPUNCTURE FEVER"

Reviewing the modern history of acupuncture since 1949, there have been at least three major periods of widespread AF around the world [3]. For each period, acupuncture has increased its popularity which is often related to the negligence of the meridian theory. The authors define this negligence as De-Meridian.

The first period can be traced back to China in the 1950's, the renaissance period of TCM and acupuncture. Following the book *Chinese Acupuncture Therapy* (《中国针灸学》), by Cheng Dan-An, Zhu Lian published the book *The New Acupuncture* (《新针灸学》) in 1951, which was a representative text of that era. In Zhu's book[4], many acupoints and related clinical applications were discussed without acknowledging the meridian theory. Moreover, Zhu's book applied Pavlov's reflex theory to explain the mechanism of acupuncture, such as the analgesia mechanism of needling Hégǔ (合谷 LI 4) for toothaches. Its mechanism was recognized as the transformation of excitatory focuses at the cerebral cortex due to the stimulation at the hand.

The second period occurred during the Culture Revolution of China (from the mid 1960's to late 1970's). During that period, no matter urban or rural, clinical applications of acupuncture and scientific researches of its mechanisms were prevalent. Since then, there has been a remarkable progress in the recognition of acupuncture mechanisms and the essence of meridians. The most prominent finding is that the intact nervous system is a prerequisite to achieve acupuncture efficacy. However, the study of the essence of meridians could not identify any specific anatomical structures related to traveling courses of meridians at body surface. On the other hand, a form of contemporary acupuncture called Novel Needling Therapy became prevailing in the clinic. It featured intense stimulation without needle-retention and focused on the efficacy of acupoints, all the while not requiring the classical manipulation technique. As a result, the knowledge about the efficacy of classical acupoints has been widely expanded, and a large number of new or extra-meridian points were found, making it difficult to be categorized by the classic meridian system. Furthermore, many other forms of contemporary needling therapies were created, such as Auricular acupuncture (1972), Scalp acupuncture (1971), Wrist and ankle acupuncture (1972), and Nerve-stimulation therapy (1973). The theoretical bases and stimulation locations of these therapies are not based on the meridian theory, yet all can attain clinical efficacies. Over time, various micro-acupuncture therapies targeting certain smaller body areas, such as the hand, foot, eye, nose, cheeks and tongue have emerged, none of which are based on the meridian theory. As the Cultural Revolution was ending, this period of AF with distinctive features of De-Meridian also gradually subsided.

The third period, or often called as overseas AF, officially began in the West during the early 1970's, and continues up to now. With China's open door policy, a large number of TCM doctors who were trained in western medicine went abroad to practice acupuncture. Most of them understood the importance of developing acupuncture using a integrative approach rather than simple inheritance of the traditional meridian theory, once again accelerating the process of the De-Meridian movement in acupuncture.

Since 1976, the authors have published three books: *Acupuncture and Cybernetics* (《针灸与控制论》), *Clinical Reflexology of Acupuncture* (《临床针灸反射学》)[5], and *Contemporary Medical Acupuncture: A Systems Approach* (《现代医学针灸—系统论方法》)" [6] to facilitate the modernization of acupuncture. In our books, a novel theory of Acu-Reflexology is introduced to elucidate and simplify the meridian theory, and help guide clinical treatments of intractable cases. *The authors also published an atlas Whole Body Reflex Zones* (《身体反射区图谱》) to replace the classical meridian system. During the past 20 years, our Acu-Reflexology theories along with other newly emerged modalities such as Subcutaneous Needling (1996), Navel Acupuncture (2000), and TrP Acupuncture (i.e. DN) were all facilitators of the De-Meridian movement. Furthermore, numerous experimental studies of acupuncture have contributed to the rise of the De-Meridian movement. The author's point is further supported by other modern researches

of TCM. For example, by reviewing the latest results about the studies of acupuncture mechanism and meridian essence Zhu Bing's latest book *Systems Acu-Medicine: Renaissance of Somato-Medicine* (《系统针灸学—复兴体表医学》) (2015) [7], posed a critical question: "Is Meridian theory necessary to guide acupuncture?" Here, Zhu's point is clear. Because meridians cannot be present outside the tissue structures as recognized by modern anatomy, all of the recent studies on the essence of meridians, are in fact, essentially tearing away the pillars of classical meridian system from top to bottom, and then reconstructing it again for acupuncture.

In clinical acupuncture, there are at least three types of phenomena in the De-Meridian movement. First, emphasizing the locations and efficacy of acupoints while neglecting the meridian theory. Secondly, selecting reflex zones or points for stimulation whether or not they are acupoints or located at or around meridians. Thirdly, identifying the stimulation locations only based on modern anatomy and physiology knowledge while not applying the meridian theory to guide clinical acupuncture [8].

According to these phenomena, it appears that the De-Meridian movement of acupuncture has actually been in existence for quite some time through the history of AF. In the past it was generally subtle, but through the ongoing debate on DN recently, it has become more prominent. To date, the De-Meridian movement including DN, has played a somewhat positive role in the development of acupuncture.

DE-MERIDIAN DOES NOT MEAN DE-ACUPUNCTURE

As mentioned above, to distinguish from De-Meridian, the authors coined a novel term De-Acupuncture to describe certain modalities that were derived from acupuncture but are in fact different from acupuncture.

Let's first review acupuncture's proper definition. By World Health Organization (WHO), "Acupuncture literally means to puncture with a needle. However, the application of needles is often used in combination with moxibustion—the burning on or over the skin of selected herbs ..."[9] By National Institute of Health (NIH), "Acupuncture describes a family of procedures involving stimulation of anatomical locations on the skin by a variety of techniques··· mainly through the penetration of the skin by thin, solid, metallic needles, which are manipulated manually or by electrical stimulation" [10].

According to above, any modalities, as long as they apply needles to puncture certain locations at the body surface, belong to acupuncture in spite of how and where the locations of stimulation are determined by either western neuroanatomy or TCM meridians. Typical examples are Scalp Acupuncture and Nerve Trunk Stimulation Therapy, whose locations of stimulation are determined by western neuroanatomy, like DN. The former is based on the reflection of cerebral cortex on the scalp, while the latter directly stimulates the nerve trunks or nerve points of the body. However, different from DN, these modalities never claimed they were not acupuncture or De-Acupuncture. Other examples are Subcutaneous Needling, and Navel Acupuncture, which are also the by products of De-Meridian. However, all of them are in the scope of acupuncture.

On the other hand, certain modalities may exhibit both attributes of De-Meridian and De-Acupuncture. A typical example of this is acupotomy [11], a type of non-invasive surgery using a small needle-scalpel instead of acupuncture needles (De-Acupuncture), without applying the meridian theory (De-Meridian). Acuptomy is also a form of minimum-invasive surgery, which is commonly used to treat chronic injuries, soft tissue disorders and the abnormal bony growths.

In short, De-Meridian is not equivalent to De-Acupuncture. As we previously mentioned, DN has De-Meridian attributes, but it uses acupuncture needles and techniques, therefore it does not have De-Acupuncture attributes. In other words, as long as DN applies filliform needles to stimulate TrPs, it is in the scope of acupuncture. De-Meridian attributes exhibited by DN are unquestionable, but to protect the public safety of patients seeking acupuncture, we refute the De-Acupuncture claim by DN educators.

DRY NEEDLING: A FORM OF CONTEMPORARY ACUPUNCTURE

Categorizing DN as a form of contemporary acupuncture is based on the following facts.

First, the needles and needling techniques used in DN and acupuncture are one in the same. Even though the injection needles without medications were first proposed to use by DN, now these dry injection needles are rarely used due to the risk of damaging local nerves. For a long time, stimulation of TrPs has been conducted by manual methods, such as manual

therapy, including bodywork or massage. Instead, modern style of DN has just been using acupuncture needles [2], and the development of DN is based on acupuncture's clinical trials and experimental research.

Secondly, TrPs used by DN are just acupoints or *Ashi* points coined in ancient China. In 1977, Melzack, et al.[12] found a remarkably high degree (71%) of correspondence between TrPs and acupuncture points. This close correlation suggests that TrPs and acupuncture points for pain, though discovered independently and labeled differently, represent the same phenomenon and can be explained in terms of the same underlying neural mechanisms. In a June 2000 review article, Hong CZ [13] correlated the "tender points" to acupuncture's *Ashi* points, and the "local twitch response" to acupuncture's *Deqi* based on the works of Melzack, et al. According to Dorsher P's[14] comment, 92% of the 255 TrPs correspond to acupuncture points.

Thirdly, the mechanism of DN and acupuncture are one in the same. For example, it was reported that DN and TrPs are most effective when local twitching responses are elicited [15], which is same as that occurred during acupuncture. In our books, the pulsating responses of muscle twitching are considered as an "amplified" or visible phenomenon of *Deqi*. Obviously, the therapeutic mechanism of DN is the same as acupuncture, which achieves the efficacy via neural reflex arcs [6].

Based on the above reasons and the definition of acupuncture, DN is a form of contemporary acupuncture, which can also be referred as Western acupuncture, medical acupuncture [15], or DN acupuncture [16]. It's most appropriate name should be TrP acupuncture[17].

PROS AND CONS OF TRIGGER POINT ACUPUNCTURE

Below are some pros and cons of DN under the name of TrP acupuncture:

Pros: TrP is a common type of reflex points and is invaluable for studying. TrP stimulation reinforces the recognition on the importance of reflex point stimulation in modern acupuncture, especially for acupuncture analgesia[15]. Moreover, the researches of DN often may help answer some confusing questions in the acupuncture clinic. For example, in a double-blind study of 42 patients with lumbar myofascial pain[18], the finding is that the deep DN technique resulted in significantly better analgesia than the superficial DN technique, indicating that muscular afferents are more important for the transmission of acupuncture analgesic signals than the skin afferents.

Cons: As DN refuses to inherit the theory and experience from thousands of years of acupuncture practice, it has shown obvious shortcomings in clinical applications.

First, the scope of reflex points is broad. There are many other types of reflex points on the body surface besides TrPs. Even those caused by myofascial pain may not just be inside the muscle; perhaps they may be located on the skin or subcutaneous tissues. Moreover, the outputting information at TrPs can either be caused by local myofascial disorders or certain systemic diseases, such as visceral disorders [6], making them difficult to be distinguished.

Secondly, the indications of DN are not as broad as that of traditional acupuncture as they are only limited to myofascial pains. For examples, for knee osteoarthritis, directly inserting needles into the articular cavity through Xiyan (EX-LE 5) is very critical to attain optimal results [6], yet Xiyan is not a myofascial TrP.

Thirdly, acupuncturists are holistic practitioners, unlike DN practitioners, who only apply needling on TrPs to treat myofascial pains. Currently, the training required for DN practitioners are much less than that required for acupuncturists [1-2], thus DN practitioners often lack necessary skills to attain optimal efficacy through holistic considerations.

CONFLICTS OF INTERESTS: None

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ABSTRACT IN CHINESE

[摘 要] 近年来在西方崛起的干针疗法，以其不用经络学说作指导（去经络化）为主要理由，宣称自己不是针灸（去针灸化），其操作者无须接受针灸师所需要的必要训练。本文驳斥了这种错误认识。我们首先回顾海内外列次针灸热中“去经络化”现象的不同内涵，在认可其对于推广针灸的正面作用的同时，明确指出“去经络化”不等同于“去针灸化”。根据世界卫生组织关于针灸的定义，干针疗法与其他多种新针疗法一样，尽管具有“去经络化”的特征，但都属于针灸的范畴。干针不过是现代针灸的一种形式，也就是激痛点针灸。这不仅是因为干针所刺激的体表位置——激痛点本来就是针灸穴位的一种，而且包括针具在内的干针技术与传统的针灸技术无异，此外，干针的机制与针灸机制完全相同，干针现代理论的发展及其应用都离不开针灸的临床试验与实验研究。虽然干针对激痛点刺激的研究成果也强化了现代针灸重视刺激反映点的认识并丰富了相关经验，但干针与经络体系的完全切割，使它失去了传承千年的针灸理论与宝贵经验的支撑，导致它目前的临床应用具有明显的缺陷。
[关键词] 干针 激痛点 针灸 去经络化 去针灸化