Academic Debate

The Comparison of trigger point acupuncture and traditional acupuncture

激痛点针灸与传统针灸的关系与比较

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ABSTRACT

Trigger point (TrP) acupuncture (dry needling), the use of solid filiform needles at TrPs, has been developed from a comprehensive integration and adaptation of traditional acupuncture using current understandings of TrPs. During the past twenty years, the concept and technique continues to evolve, with a potential to expand to other conditions beyond myofascial pain syndromes that can be managed via stimulating TrPs. In this article, we compared TrP acupuncture and traditional acupuncture from the following aspects: points of needle insertion, needles and needling techniques, and therapeutic indications. Traditional acupuncture encompasses an abundance of methods and techniques in acupuncture practices and has been widely used and studied for a variety of disorders. With unique specific characteristics, TrP acupuncture further develops traditional acupuncture theories, especially the concepts of *Ashi* point. The location of TrPs, their distribution pattern and pain indication are similar to those of traditional acupoints; the selection of needles, depth of needle insertion, and manipulation techniques are part of traditional acupuncture. TrP acupuncture is thus an integral part of traditional acupuncture.

KEY WORDS: trigger points; acupuncture; trigger point acupuncture; pain; myofascial pain syndrome

INTRODUCTION

Expert opinions collected from 1996 World Health Organization (WHO) Consultation on Acupuncture in Cervia, Italy stated that: acupuncture literally means to puncture with a needle at certain points of the human body [1]. It includes traditional body needling, moxibustion, electric acupuncture (electroacupuncture), laser acupuncture (photo acupuncture), microsystem acupuncture such as ear (auricular), face, hand and scalp acupuncture, and acupressure (the application of pressure at selected sites) [1].

Acupuncture has been used in eastern Asian countries for the management of various disorders for thousands of years. During the past 50 years, evidence from numerous randomized, controlled trials and systematic reviews and meta-analyses further confirmed the therapeutic efficacy of acupuncture in multiple prevalent diseases in the worldwide population [2]. Early in 1960s, researchers started to realize that acupuncture majorly functions via modulating the nervous system[3]. A series of

studies, pioneered by Han Ji-sheng's group from Peking University, proved that acupuncture process could signal the brain to release endorphines, a group of endogenous opioid neuropeptides acting like morphine, to manage clinical pain in various conditions [3].

In 1994, the National Institute of Health (NIH) consensus recommended that acupuncture needle should be categorized as a legal medical device for clinical practice rather than research-only device; and this opinion was approved by the Food and Drug Administration (FDA) [4]. Later in 1997, NIH organized a consensus workshop to recognize the clinical efficacy of acupuncture for some disease conditions, such as addiction, stroke rehabilitation, headache, menstrual cramps [5]. In 2012, Vickers et al [6] published a high-quality meta-analysis using original data from each trials, demonstrating that acupuncture is significantly better than sham or control interventions in pain treatment. Because of the growing patient needs, clinical benefits, and accumulated research evidences, acupuncture has become increasingly popular and widely accepted in the West of America.

Trigger point (TrP) acupuncture (dry needling), has been developed from a comprehensive integration and adaptation of traditional acupuncture using current understandings of TrPs. It particularly refers to the use of solid filiform needles at TrPs. TrP is defined as local, hyperirritable spot in skeletal muscles, which could give rise to characteristics of referred pain, autonomic nerve transmission, or proprioception dysfunction [7]. The formation of TrP is usually associated with visceral pain, nerve root pain or simply myofascial pain [7]. Because of its conveniences in application, instant clinical efficacy, and superiority over conventional treatments for chronic pain[6,8], TrP acupuncture has been popularized in managing myofascial pain syndrome, a condition characterized by chronic pain in multiple myofascial TrPs ("knots") and fascial constrictions. After adopting different names among conventional medicine practitioners, the concept and technique continues to evolve, with a potential to expand to other conditions that can be managed via stimulating TrPs [9].

Clinicians in the modern biomedical field are reluctant to accept and sometimes reject the prescientific notions of naturalistic theories including *yin-yang*, five elements, meridians and even acupoints in traditional acupuncture [2]. Thus, the exact name of the needling procedures may vary depending on the medical profession practicing it, but the techniques of TrP acupuncture has garnered extreme popularity in the United States and the rest of the world during the past two decades [10]. Nonetheless, clinicians and patients who are unfamiliar with the development and practice of modern acupuncture remain puzzled about the similarities and differences between TrP acupuncture and traditional acupuncture. In this article, we aimed to compare these two types of acupuncture from the following aspects: points of needle insertion, needle selections and needling techniques, and therapeutic indications.

LOCATION OF POINTS, DISTRIBUTION PATTERN, AND PAIN INDICATION

The location of traditional acupoint and trigger points

Unlike acupoints in traditional acupuncture, needles of TrP acupuncture are mainly inserted at TrPs which share great similarities with traditional acupoints[11-12]. The book *Myofascial Pain and Dysfunction: the TrP Manual* has been considered as the bible of TrP therapies including TrP acupuncture[7]. Inside this manual, Simons and Travell documented 255 TrPs distributed across 147 muscles on the human body [7]. These TrPs are usually tender points with a surface area less than 1 cm^2 on skeletal muscles, and their exact locations could vary upon individuals [7]. Compared to 361 meridian acupoints well documented in classics of acupuncture, the 255 TrP accounts for around two thirds of the number of traditional acupoints. Early in 1977, Melzack and colleagues [11] compared the locations, indications of pain management and transmission paths of TrPs and traditional acupoints and revealed a similarity of 71% between these two types of points. Later, Dosher [12] used an anatomy software to map the 255 TrPs and compared them with the 747 traditional acupoints on or off meridians, and found that 92% TrPs anatomically overlap with traditional acupoints.

Distribution of traditional acupoints, *Ashi* points and trigger points

Besides the same anatomic locations and clinical effects shared by traditional acupoints and TrPs in the management of pain, TrPs also share similar distribution patterns with traditional acupoints. TrPs are usually located at the center of muscle bellies, muscle-tendon junctions, and locations of muscle insertions at bones[9]. Each muscle of the human body can have its own specific pain patterns and sensation transmission with pressure at TrPs. Locations of traditional acupoints usually involves tendon attachment regions or joint areas close to