Evidence and Expert Opinions: Dry Needling versus Acupuncture

The American Alliance for Professional Acupuncture Safety (AAPAS) White Paper 2016

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Summary

In the last twenty years, in the United States and other Western countries, dry needling (DN) became a hot and debatable topic, not only in academic but also in legal fields. This White Paper is to provide the authoritative information of DN versus acupuncture to academic scholars, healthcare professionals, administrators, lawmakers, and the general public through providing the authoritative evidence and experts' opinions regarding critical issues of DN versus acupuncture, and then reach consensus.

We conclude that DN is the use of dry needles alone, either solid filiform acupuncture needles or hollow-core hypodermic needles, to insert into the body for the treatment of muscle pain and related myofascial pain syndrome. DN is sometimes also known as intramuscular stimulation, TrP acupuncture, TrP DN, myofascial TrP DN, or biomedical acupuncture. In Western countries, DN is an over-simplified acupuncture using biomedical language in treating myofascial pain, a contemporary development of a portion of *Ashi* point (Ah-yes point, or tender point) acupuncture from traditional Chinese acupuncture. As developed by Travell & Simons, C. Chan Gunn and Peter Baldry, et al, it seeks to redefine Acupuncture by re-translating reframing its theoretical principles in a Western manner. It reflects the effort of de-acupoint, and de-theory of Chinese medicine by some healthcare professionals and researchers. DN with filiform needles have been widely used in Chinese acupuncture practice over the past 2,000 years, and with hypodermic needles as Dr. Travell described has been used in China in acupuncture practice for at least 72 years. In Eastern countries, such as China, since 1800s or earlier, DN is a common name of acupuncture among acupuncturists and the general public, which has been used 2000 years, and its indications, is not limited to treating and preventing musculoskeletal disorders or illness including so called the myofascial pain.

Medical doctors Travell, Gunn, Baldry and others who have promoted dry needling by simply rebranding: (1) acupuncture as dry needling and (2) acupuncture points as trigger points (dry needling points). Dry needling simply using English biomedical terms (especially using "fascia" hypothesis) in replace of their equivalent Chinese medical terms. Trigger points belong to the category of *Ashi* acupuncture points in traditional Chinese acupuncture, and they are not a new discovery. By applying acupuncture points, dry needling is actually trigger point acupuncture, an invasive therapy (a surgical procedure) instead of manual therapy. Travell admitted to the general public that dry needling is acupuncture, and acupuncture professionals practice dry needling as acupuncture therapy and there are several criteria in acupuncture profession to locate trigger points as acupuncture points. Among acupuncture schools, dry needling practitioners emphasize acupuncture's local responses while other acupuncturists pay attention to the responses of both local, distal, and whole body responses. For patients' safety, dry needling practitioners should meet standards required for licensed acupuncturists and physicians.

DN is not merely a technique but a medical therapy and a form of acupuncture practice. As a form of acupuncture, an invasive practice, it is not in the practice scope of physical therapists (PTs). DN has been "developed" simply by replacing terms and promoted by acupuncturists, medical doctors, and researchers, and it was not initiated by PTs. In order to promote DN theory and business, some commercial DN educators have recruited a large amount of non-acupuncturists, including in PTs, as students and customers in recent years. The national organizations of PT profession, such as APTA and FSBPT, started to support the practice of DN by PTs around 2010. Currently, there are probably more PTs involving DN practice and teaching than any other specialties. In most states, licensed acupuncturists are required to attain an average of 3,000 educational hours via an accredited school or program before they apply for a license. The physician or medical acupuncturists are required to get a minimum of an additional 300 educational hours in a board -approved acupuncture training institution and have 500 cases of clinical acupuncture treatments in order to get certified in medical acupuncture. However, a typical DN course run only 20-30 hours, and the participants may receive "DN certificate" without any examination. For patients' safety and professional integrity, we strongly suggest that all DN practitioners and educators should have met the basic standards required for licensed acupuncturists or physicians.

KEYWORDS dry needling, acupuncture, biomedical acupuncture, authoritative evidence, experts' opinions, consensus

The American Alliance for Professional Acupuncture Safety (AAPAS), a non-profit organization, is a multi-state union of professional associations, organizations, and acupuncture schools. The purpose of this organization is to help protecting the long lasting reputation of acupuncture as a safe and effective practice of medicine. AAPAS members are very concerned about the recent expansion of "dry needling" (DN), the use of acupuncture needles by physical therapists (PTs) and others who are lack of training or the legal licensure to practice acupuncture. The aim of AAPAS's White Paper is to provide the authoritative evidence and experts' opinions regarding critical issues of DN versus acupuncture to academic scholars, healthcare professionals and administrators, lawmakers, and the general public.

What Is Dry Needling?

Evidence

American Physical Therapy Association (2013) wrote: "DN is a skilled intervention that uses a thin filiform needle to penetrate the skin and stimulate underlying myofascial trigger points (TrP), muscular, and connective tissues for the management of neuro-musculoskeletal pain and movement impairments. DN is a technique used to treat dysfunctions in skeletal muscle, fascia, and connective tissue, and, diminish persistent peripheral nociceptive input, and reduce or restore impairments of body structure and function leading to improved activity and participation."[(1)]

Ma,[(2)] a known licensed acupuncturist and DN expert from The World Federation of Acupuncture and Moxibustion Societies said: "DN was first developed ….. by Janet Travell, MD ….. DN a.k.a biomedical acupuncture is based on modern understanding of human anatomy and patho-physiology and on modern scientific research, drawing heavily on leading-edge neurological research using modern imaging techniques such as functional MRIs of the brain." There is confusion however created by him. The DN he teaches, which he wrote later [(2)], claims that the technique is a modern Western medical modality that is not related to Traditional Chinese acupuncture in any way. He argues that DN has its own theoretical concepts, terminology, needling technique and clinical application and that: (1) DN is not practicing acupuncture, (2) DN has no relationship with acupuncture, and (3) it was developed by PT themselves.

Dommerholt,[(3)] a known physical therapist and the author of *Trigger Point Dry Needling* wrote: "DN is an invasive procedure in which a solid filament needle is inserted into the skin and muscle directly at a myofascial TrP. A myofascial TrP consists of multiple contraction knots, which are related to the production and maintenance of the pain cycle. ….DN also falls within the scope of acupuncture practice….. In contrast to most schools of acupuncture, DN is strictly based on Western medicine principles and research."

The Council of Colleges of Acupuncture and Oriental Medicine (CCAOM) states: "'DN' has resulted in redefining acupuncture and re-framing acupuncture techniques in western biomedical language. Advancement and integration of medical technique across professions is a recognized progression. However, the aspirations of one profession should not be used to redefine another established profession. In addition proponents of 'DN' by non-acupuncture professionals are attempting to expand TrP DN to any systemic treatment using acupuncture needles and whole body treatment that includes DN by using western anatomical nomenclature to describe these techniques. It is the position of the CCAOM that these treatment techniques are the *de facto* practice of acupuncture, not just the adoption of a technique of treatment." [(4)]

The National Institutes of Health states: acupuncture is "a family of procedures involving the stimulation of points on the body using a variety of techniques." [(5)]

The United States (US) Center for Medicare and Medicaid Service (CMS.gov) states: "Acupuncture, in the strictest sense, refers to insertion of dry needles, at specially chosen sites for the treatment or prevention of symptoms and conditions."[6]

The World Health Organization (WHO) states in the *Standard International Acupuncture Nomenclature* that TrP needling (i.e. DN) is a subset of acupuncture.[7]

Expertise

Zhou, et al [8] reviewed DN history and compared the theories and techniques of DN and acupuncture, and concluded that DN is a kind of Western acupuncture for treating myofascial pain. DN as a subcategory of acupuncture uses the same needles, similar stimulating points, the same or similar needling techniques, and involves the same biologic mechanisms.

Peng, et al [9,10] compared four aspects of DN with acupuncture: the points of the needle insertion, needles, needling techniques, and therapeutic indications. They concluded that DN can be called TrP acupuncture. With some unique characteristics, DN can be recognized as a contemporary development of traditional acupuncture, and belongs to the category of the *Ashi* point (literally, "Ah-yes; this is the needling point", tender point) acupuncture, one of major acupuncture schools in traditional acupuncture. Traditional acupuncture encompasses an abundance of methods and techniques in acupuncture practices and has been widely used and studied for the management of a variety of disorders. The locations of TrPs, their distribution patterns and clinical indications are very similar to those of the traditional acupuncture points; the selection of the needles, depth of needle insertion, and manipulation of the needles in DN are all same as those of traditional acupuncture. However, DN focuses on treating myofascial disorders, and only involves a small fraction of techniques of traditional acupuncture. Consequently, DN is an integral part of the traditional acupuncture.

Zhu and Most [11] reviewed four features of needling techniques and explored the similarities and differences between DN and acupuncture. The four features are: (1) needles used; (2) target points; (3) action mechanisms; and 4) therapeutic effects. A PubMed search for articles on DN and acupuncture for the years spanning from 1941 to 2015 was used to retrieve qualified papers for the analysis. They concluded that DN and acupuncture overlap significantly in the aforementioned four features, and both can be used to treat musculoskeletal disease effectively. However, because of a lack of adequate training and appropriate regulation, the safety of DN practice by PTs has been questioned. Similarly, the authors concluded that DN is one type of acupuncture when solid filiform needles are used.

Jin, et al [12] stated that "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 neuro-anatomy or traditional Chinese medicine (TCM) meridians……the mechanism of DN and acupuncture are one in the same……which achieves the efficacy via neural reflex arcs." "De-meridian (where the meridian theory is not required for acupuncture and other related modalities) is not equivalent to de-acupuncture (modalities derived from but different from acupuncture)……DN has de-meridian attributes but it use acupuncture needles and techniques, therefore it does not have de-acupuncture attributes. In other words, as long as DN applies filiform 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."

Other Opinions

Based on the description of Dr. Travell, et al [13], who first described DN systemically, DN is used in contrary to the "wet needling", which is also known as medication injection at local tender point. When using intramuscular analgesics or anesthetics to treat a variety of pain, for many conditions, the types of drugs in the injection were later found not important.[8,13] Additional studies revealed that as long as the injection needle pierces the muscular and the related fascia tissue, there is analgesic effect .[8,13] The needles used in the early publications to perform DN were hollow-core hypodermic needles, as injection of saline or local anesthetic was simultaneously mentioned and compared.[8] There were only a few publications in DN before 2000.[11,14] In the last fifteen to twenty years, in the US and other Western countries, DN became a hot and debatable topic,[1,8, 10-11,14-18] not only in academic but also in legal fields. Some therapists from different professions use solid filiform acupuncture needles, piercing the muscle fascia tissue into myofascial TrP, to release muscle tension and other pathological conditions, for the treatment of myofascial pain and related diseases. Some of them recognize DN as acupuncture,[8-11,16-20] while others, especially some DN teachers, physical therapy practitioners and organizations, claim no relation between DN and acupuncture.[1, 2, 15,21] Additionally, in Eastern countries, DN is a synonym of acupuncture, referring using solid filiform needles to treat diseases.[11, 17]

AAPAS Comment

DN is the use of dry needles alone, either solid filiform acupuncture needles or hollow-core hypodermic needles, to insert into the body for the treatment of muscle pain and related myofascial pain syndrome. DN is sometimes also known as intramuscular stimulation, TrP acupuncture, TrP DN, myofascial TrP DN, or biomedical acupuncture.

In Western countries, Janet Travell, a medical doctor, has been considered as the Mother of DN therapy, because she was the first person who systematically summarized the myofascial TrPs theory and used hypodermic needles (not focus on injecting in medications) to needle into TrPs (i.e. DN) to treat myofascial pain. DN has been gradually become popular since 1992, especially after 1999. PTs and other related professionals have been gradually become interested in practicing DN in the past twenty years.

Definitions from related authorities and analyses from independent scholars all indicate that, in Western countries, DN, which has developed much later than acupuncture, and acupuncture use the same tool (acupuncture needles), the same points (but in different names), the same purpose (in treating myofascial pain), and the same needling techniques. DN is indistinguishable from acupuncture. In fact, American Physical Therapy Association's primary white paper on DN[1] and other authors' DN publications [2,3,13-15,18] cite to published acupuncture studies, including clinical trials and basic scientific studies in animals, to support the effectiveness and benefits of DN. DN actually is a form acupuncture using biomedical language in treating myofascial pain. It is a contemporary development of a portion of *Ashi* point acupuncture from traditional acupuncture. In Eastern countries, such as China, since late of 1800s or earlier, DN is a common name of acupuncture among acupuncturists and the general public, which has a broader scope of indications, not limited to treating the myofascial pain.
In sum, from every aspect of medicine, DN is a synonym to acupuncture, or more specifically, DN is a subtype of acupuncture.

Who First Used Dry Needling in the West?

Evidence

Baldry in 2005 published the history of the British Medical Acupuncture Society, indicated that in 1821 and 1828, Dr. James M. Churchill published the book *A Treatise on Acupuncture*, using the information gathered from Japan and China. John Elliotson, a professor of Medicine at University College Hospital of London, also wrote a paper on acupuncture in 1827. Neither of them employed the complex procedures, techniques, meridian and other theories of traditional Chinese acupuncture as they were trying to avoid the rejection of acupuncture by the medical doctors of the time. Instead, they treated musculoskeletal pain by the far simpler expedient of inserting needles at sites of maximum tenderness – a procedure that was clearly the forerunner of the present day treatment known as DN.[22]

In the West, the earliest use of the term DN probably was by Paulett, who reported that both 'DN' (using injection needle) and injecting saline could relieve low back pain in 1947.[14]

Gunn, et al [23] in 1976 proposed that "As a first step toward acceptance of acupuncture by the medical profession, it is suggested that a new system of acupuncture locus nomenclature be introduced." And he started using the term DN to replace acupuncture in his publications in 1980. [24] This probably is the formal beginning of DN popularity in the West.

Travell[13] was the first influential person who systematically summarized the needling techniques with the term DN when referring to the procedure of hypodermic needles and acupuncture. The origin of DN has been attributed to her because of her popular book, titled *Myofascial Pain and Dysfunction: Trigger Point Manual*,[13] in which she uses the term DN to differentiate between two needling techniques (with or without medications) when performing TrP therapy. She and her colleagues explored the pathology of myofascial pain, and its effective treatments which might include DN as early as in 1952. [25] The *Trigger Point Manual* has thus been considered as the "bible" of TrP therapies (including DN) and Travell has been respected as the founder of DN. [2, 8, 14, 15]

Expertise

Legge [14] highly praised Brav and Sigmond's work in 1941 because they found that pain could be relieved by simple hypodermic needling without injection of any substance. One group in the study who received needling without any substances had results almost similar to the group with Novocain injections. This outcome was described as a ''startling'' result. Although the term DN was not used, the author Legge considered this was the first time the DN technique was used in a Western context.

Fan, et al [18] pointed out that the first person in the US who used filiform needle (acupuncture needle) under the term of DN to treat patient is Mark Seem, the founder of Tri-State College of Acupuncture in New York. Seem claims that he expanded classical Chinese acupuncture approach via integrating the work of Janet Travell in acupuncture needling for myofascial pain. Seem stated that he shared with Travell the classical acupuncture technique in treating a chronic, complex whiplash syndrome to release such TrPs. Seem also authored the book *A New American Acupuncture* covering this topic of DN which was published in 1993. He taught this acupuncture method (DN) internationally for over 25 years before his completely retired.[26]

Hoyt [27] wrote "Dry Needling, as developed by Travell & Simons, C. Chan Gunn and Peter Baldry, seeks to redefine acupuncture by reframing its theoretical principles in a Western manner. This changing of Acupuncture's context is justified by a search for a biomedical principle by which Acupuncture affects its therapeutic properties. Attempting to provide new insight into a time honored healing model……".

Other Opinion

In the *Myofascial Pain and Dysfunction: Trigger Point Manual which* published in 1999,[13] Simons and Travell analyzed the reports of three needling techniques (needling with filiform needles, needling with hypodermic needles without injection or with small injection of anesthetic drugs), and concluded that DN could also be called acupuncture and appraised that acupuncturists perform DN "very well".

AAPAS Comment

Through the Western history of DN as described by various scholars, the early practice of DN can be traced to an article in 1941 and not until late 1990s, DN was performed with hypodermic needles limited to TrP needling (or the intramuscular stimulation).

Brav and Sigmond discussed DN-like technique under the context of acupuncture.[28] TrP or motor point is part of tender point, which was used widely by acupuncturists in both Western and Eastern countries with a very long history. TrP acupuncture, also known DN, has no essential difference from the typical acupuncture practiced by physicians in western countries since 1821. The first person who demonstrated acupuncture with filiform needle under the term DN was Mark Seem, a licensed acupuncturist and acupuncture educator.

Travell has been regarded by physical therapists as the founder of DN, because she detailed the locations and indications of 255 TrPs in 144 muscles, and she was President Kennedy's personal doctor. Travell did summarize DN techniques, but that was only a very limited fraction of her book. She largely cited the work by Hong, an acupuncturist [26] and medical doctor who used the term DN in his own publications. Travell admitted openly that DN is also called acupuncture.[13] In fact, while discussing the usage of DN, Travell herself preferred to use hypodermic needle puncture plus small dose of lidocaine injection,[13] which actually is same style as Chinese small-dose acupoint drug injection, another style of acupuncture practice.[29-31]

Our conclusion is that the current DN in Western countries is a style of simplified traditional acupuncture, or a contemporary acupuncture approach in treating myofascial pain using biomedical language. It reflects the effort of practicing acupuncture without following the traditional acupoint, meridian, and other TCM theory by some healthcare professionals and researchers (especially some acupuncturists and medical doctors) since 1821, especially 1976, nevertheless, DN still falls in the broad category of acupuncture. There is clear evidence supporting that no matter who is the practitioner and what theory is based, DN is an inherited part of traditional acupuncture.

Has Dry Needling Been Used in China?

Evidence

The US Center for Medicare and Medicaid Service (CMS.gov) says: "Acupuncture, in the strictest sense, refers to insertion of dry needles, at specially chosen sites for the treatment or prevention of symptoms and conditions."[6]

Yellow emperor's Inner Classis (Huangdi Neijing), [32] precisely described nine kinds of dry needles for different style of needling therapies. The Nine Needles was the collective term for the needling instruments used since ancient times including *chan zhen* (arrow-headed needle), *yuan zhen* (round needle), *chi zhen* (blunt needle), *feng zhen* (lance needle), *pi zhen* (stiletto needle), *yuanli zhen* (round sharp needle), *hao zhen* (filiform needle), *chang zhen* (long needle) and *da zhen* (big needle). Currently

the most commonly used needle type in acupuncture practice is *hao zhen*, a thin short form of filiform needles. Well documented literature in China shows that various types of acupuncture needles, including those similar to the needles used in current DN practice in the West, were continuously used in China for at least 2000 years.

According to the definition of DN implied from Travell's book "Myofascial Pain and Dysfunction: Trigger Point Manual" [13], it includes applying different needles for the needling therapy except for those focus on injecting medications. Actually DN needles are commonly utilized acupuncture needles. The DN technique preferred and recommended by Travell is using hypodermic needle to puncture the muscle knot, in the center of TrP, to induce local twitching responses and then inject a small amount of medication, such as lidocaine. Such a technique actually is called *acupoint injection* or *aqua-puncture* (shui zhen) therapy which were independently developed and widely used in China since 1954.[30,31]

TrP is a kind of tender point in muscles, consists of multiple contraction knots, which are related to the production and maintenance of the pain cycle……,[2,3, 7-13] belongs to one part of *Ashi* points (literally, "Ah-yes; this is the needling point", tender point). [7-12,18, 27,33,34] *Ashi* point acupuncture is popular among traditional acupuncturists in China. [7-12, 18, 27, 33, 34]

Yellow Emperor's Inner Classis (Huang Di Nei Jing) [32] first documented tender point needling strategy, called "the pain point (tender point) is the site for acupuncture".

The term of *Ashi* point (for tender point) was formally named by Dr. SUN Simiao (581-682 CE), a famous physician in Tang dynasty. [35] He stated that, "In terms of the method of *Ashi*, in speaking of a person who has a condition of pain, when squeezing, if there is a spot inside [we] do not ask if it is a [recognized] acupuncture point, because [we] located a painful spot and the patient said "Ah yes!". Needling and moxaing [the points] have proven effective in the past, thus they are called *Ashi* points."

Expertise

DN is a synonym term to acupuncture. In China, since late of 1800s or earlier, DN is a common name among acupuncturists and general public. The so called DN in China has a much broader scope of indications, not just limited to treating myofascial pain (by DN in Western).[11,17]

Jin, et al [12] pointed out that, in both ancient and current, both in China and in Western countries, some acupuncturists have applied the simplified style of acupuncture (same or similar to DN in Western), which does not focus on learning the classic acupoints, meridians and other TCM theory (in other words, de-acupoint, de-meridian, de-theory of Chinese medicine), although the major school of acupuncture has been the traditional acupuncture based on the Chinese medicine theory.

Peng, et al [9,10] compared four aspects of DN (in Western) with traditional Chinese acupuncture: the points of the needle insertion, needles, needling techniques, and therapeutic indications. They concluded that DN (in Western) can be called TrP acupuncture. With some unique characteristics, DN (in Western) can be recognized as a contemporary development of traditional Chinese acupuncture, and belongs to the category of the *Ashi* point (literally, "Ah-yes; this is the needling point", tender point) acupuncture, one of major acupuncture schools in traditional acupuncture. Traditional acupuncture encompasses an abundance of methods and techniques in acupuncture practices and has been widely used and studied for the management of a variety of disorders. The locations of TrPs, their distribution patterns and clinical indications are very similar to those of the traditional acupuncture points; the selection of the needles, depth of needle insertion, and manipulation of the needles in DN (in Western) are all same as those of traditional acupuncture. However, DN (in Western) focuses on treating myofascial disorders, and only

involves a small fraction of techniques of traditional acupuncture. Consequently, DN (in Western) is an integral part of the traditional acupuncture.

Zhou, et al, [8] Zhu and Most [11] reached similar conclusions.

Other Opinion

There are different schools of acupuncture practices in China. Although the large majority of acupuncturists followed the TCM theory, there are other schools of acupuncturists who practice needle treatment based on non-traditional theories, such as neurological system, myofascial structures, anatomy, and different ethnic acupuncture. All these needling therapies, including using filiform needles for stimulating points and hollow-core needles for point injections, are considered and administrated as acupuncture practice in general. There is never an issue or challenges by any professionals in China.[12,17, 33, 34]

AAPAS Comment

The needles currently used in DN in the US and other Western countries are the same as those used in China in acupuncture practice which include both filiform needles and hollow-core hypodermic needles. Filiform needles have been used in acupuncture practice over the past 2,000 years, and hypodermic needles for DN as Travell described has been used in China in acupuncture practice for at least 72 years. Needling therapies may be performed by using either filiform or hollow-core needles, but they all belong to the general umbrella of acupuncture. The style of DN in the US and other Western Countries is part of *Ashi* acupuncture from China, just in different name, and has been practiced in China for over 2,000 years.

Does Dry Needling Use Acupuncture Points?

Evidence

Dry needling (DN) is based on using dry needles (i.e. filiform, hypodermic hollow-core needle, or other injection needles) to pierce and stimulate trigger points (TrPs). [8, 13, 14, 36]

Dr. Travell and her colleagues systematically summarized 255 TrPs in 144 muscles in her popular book, titled *Myofascial Pain and Dysfunction: Trigger Point Manual*.[13] Thus, popularizing TrPs and DN. TrPs, the reactive (painful) acupuncture points (acupoints) in muscle bellies,[8,13,14] are described as "hyperirritable spots in the fascia surrounding skeletal muscle". They are associated with palpable nodules in taut bands of muscle fibers. The spot is painful on compression and can give rise to characteristic referred pain, referred tenderness, motor dysfunction, and autonomic phenomena. Dr. Travell admitted to the general public that DN is acupuncture when she stated in a newspaper that "the medical way of saying it is 'acupuncture.' In our language that means sticking a needle into somebody."[37] and in her book, "many practitioners of acupuncture use several TrP criteria to locate pain acupuncture points and, in fact, are successfully performing dry needling of TrPs that they speak of as acupuncture therapy".[13]

Herald Wednesday, May 21, 1947

Ancient Pain-Killing Method Works, But U. S. Scientists Don't Know Why

By Harman W. Nichols

CHICAGO, May 21 (U.P.)—Ancient Chinese doctors gave their patients the needle, and two American scientists admitted today they probably had something there.

Particularly when it comes to treating simple sprains, like puffed up ankles.

Janet Travell and Audrie L. Bobb of the Cornell university medical college presented their views on the subject before the 24th annual meeting of the Federation of American Societies for Experimental Biology.

The medical way of saying it is "acupuncture." In our language that means sticking a needle into somebody.

And, according to the scientists, it works fine.

Chinese doctors have been doing it for two thousand years, apparently with good results. And all of this time—or since the early days of American medicine, anyhow—our physicians have been experimenting with this drug and that in order to get a man up and about after he falls and sprains an ankle.

Sometimes that took quite a little spell.

But now comes the needle, and the American scientists, in that one respect, turned way back to the period B. C. for help.

Scientists Travell and Bobb were pretty technical in their paper.

But the sum substance was this: If a needle is inserted (by a skilled practitioner, of course) into a sprained area of the body, the pain is spread to a point where it more or less disappears in a hurry. The swelling is still there, but the pain—go.

They call it "dry needling," and it must have come about by accident. In inserting drugs to pained areas with a needle, the scientists finally came to the conclusion that it was the needle and not the drug which scattered the hurt.

They don't know why—but there it was.

ELIVER TO YOU

Figure 1 shows that Dr. Janet Travell admitted dry needling in her words-"the medical way of saying it is 'Acupuncture'." Nichols HW, Albany Democrat-Herald (Albany), March 21, 1947, accessed October 3, 2016. Photo provided by Lee Delorme.

Dommerholt, [3] a known physical therapist, wrote: "DN is an invasive procedure in which a solid filament needle is inserted into the skin and muscle directly at a myofascial TrP. A myofascial TrP consists of multiple contraction knots, which are related to the production and maintenance of the pain cycle. ….DN also falls within the scope of acupuncture practice….. In contrast to most schools of acupuncture, DN is strictly based on Western medicine principles and research. "

A clinical study by Anderson and colleagues [38] shows that TrPs, typical locations of tender points in many patients, were not just soft, but the softest spots in the muscle - the opposite of what most people would expect. "A heterogeneous distribution of pressure pain sensitivity and muscle hardness was found," which indicates TrPs are not necessarily the "tightest" painful spots within muscles.

The *Yellow Emperor's Inner Classic* (*Huang Di Nei Jing*, which was compiled 2000 years ago)[32] first documented the reactive (painful) acupuncture point needling strategy and stated that "the painful point is the site for acupuncture (*Yi Tong Wei Shu*)."

The term of *Ashi* point (AKA tender point) was formally coined by Dr. Sun Simiao (581-682 CE), a famous Chinese physician in the Tang dynasty, for these reactive (painful) acupuncture points. [35] He stated that, "In terms of the method of *Ashi*, in speaking of a person who has a condition of pain, when squeezing [that area], if there is a painful spot inside the patient says, "Ah yes!" Thus, they are called *Ashi* points."

Gunn, et al [23] in 1976 proposed that "as a first step toward acceptance of acupuncture by the medical profession, it is suggested that a new system of acupuncture locus nomenclature be introduced." Gunn and his colleagues started to use the term motor points (TrPs' synonym) as a substitute for the term acupoints in their publication. [24]

Expertise

Melzack and colleagues [39] published the first evidence-based study comparing TrPs with classic acupoints in traditional Chinese medicine (TCM), which was based on reviewing a set of 56 TrPs, and then they compared these to TCM classic acupoints that are primarily used to treat regional pain conditions. They found that all 56 TrPs were within 3 cm of an acupoint, and that 71% had the same pain indications as those acupoints studied. This close correlation suggests that TrPs and (classic) acupoints for pain, though …… labeled differently, represent the same phenomenon and can be explained in terms of the same underlying neural mechanisms. The discovery of anatomically defined TCM acupoints was profound as it provided a physiologic foundation for how acupuncture might work.

Birch [40] challenged Melzack's validity of conclusion and investigated the two categories of acupoints through a broader range of literature. In his review, correlated TCM acupoints were defined to exhibit pressure pain, and are used primarily for pain problems. His results showed an 18% rather than 71% correspondence of TrPs and TCM classic acupoints for the treatment of pain. He further pointed out that TrPs and (classic meridian) acupoints do not fall into same concept category, and believes that a probable correspondence of TrPs to a different class of acupoints, is the *Ashi* points.

Dorsher and Fleckenstein [41,42] applied different criteria than Melzack for anatomic correspondence and they defined that two points are correlated anatomically if they are within a 2-cm radius of each other and entered the same muscle. They investigated 255 common TrPs and compared them with TCM classic acupoints. They found that 238 (93.3%) TrPs anatomically corresponded with classical acupoints. Furthermore, if the TrPs which are located internally and thus not fit for needling are eliminated, the corresponding rate will be even higher. They stated that ''the marked correspondences of the pain indications (up to 97%) and somatovisceral indications (up to 93%) of anatomically corresponding common TrP- classical acupoints pairs provide a second, clinical line of evidence that TrPs and acupoints likely describe the same physiologic phenomena.'' Moreover, the myofascial referred-pain patterns of 76% of TrPs accurately followed relevant meridian distributions. In a further study,[43] Dorsher reviewed four acupuncture texts (three are different from Birch's selection) to examine the validity of Birch's findings. He suggested that TrPs could conceptually be compared to classic acupoints for pain disorders, and that the clinical correspondence was over 95%.

Zhou, et al [8] stated that acupuncture……the commonly used procedure for musculoskeletal pain involves *Ah Shi* points with the treatment protocols similar to those of DN.

Peng, et al [9,10] compared TrPs and acupoints, and concluded that TrPs used in DN (in Western) is acupoints, within one category of traditional acupuncture points: the *Ashi* points (literally, "Ah-yes; this is the needling point" or tender point), widely used by majority acupuncturists.

Zhu and Host [11] systematically reviewed DN history, many scholars' works on its origin, the comparisons of TrPs and acupoints, and they concluded that TrPs are exactly acupoints. They stated, "TrPs in DN and acupoints in acupuncture are derived from painful spots or tender/tight nodules. Muscle pain can be relieved effectively when the target points are needled. The same phenomenon is given different names."

Fan, et al [18, 36, 44] commented that *Ashi* originally means the reactive pain points, or tender points, while TrPs are only tender points found in muscle bellies; therefore, TrPs completely fall within the *Ashi* points category. TrPs needling has been widely and internationally used in the daily practices of acupuncturists.

Based on extensive literature review and clinical experience, Jin, et al [12] and Hong, et al [45] reached the same conclusion.

Liu, et al [46] stated that TrPs are significantly correlated to TCM acupoints, including primary channel acupoints, extra acupoints, and *Ashi* points. TrPs may be considered as a rediscovery of the nature of acupoints, at least for treating pain conditions. Considering the correlation between TrPs and acupoints and the rarely-studied research area involving *Ashi* points, it may be reasonable to apply the findings of TrPs as a valuable foundation for future investigation into *Ashi* points. *Ashi* points might be central or attachment TrPs, and the most significant characteristic of *Ashi* points may be pain recognition rather than pressure pain.

Other Facts

The National Commission for the Certification of Acupuncture and Oriental Medicine, the certifying board for licensed acupuncturists, completed an analysis in 2003 that documented the prevalence of DN techniques in the practices of licensed acupuncturists. Of acupuncturists responding, 82% used needling of TrPs in patients that presented with pain. Of patients receiving acupuncture treatment, an estimated 56% present with TrPs pain. [4]

AAPAS Comments

In traditional Chinese acupuncture using classical Chinese medical languages and contemporary biomedical languages, there are at least three categories of acupoints, [33,34] namely *Ashi* points, classical meridian acupoints and extra-meridian acupoints. *Ashi* points commonly include local or distal reactive pain points or called tender points, as well as local foci, local atrophy area, local skin change area, etc. Stimulating such *Ashi* points is a common strategy in acupuncture for the treatment of (but not limited to) pain due to neuromusculoskeletal and connective tissue disorders, and local and sometimes distal illnesses and disorders. The localization of *Ashi* is largely dependent on the palpitation and searching by the practitioners; sometime its central point location has some variations in different patients with the same condition or even in same patients in different stages of the condition. Classical TCM acupoints include 361 points on 14 major meridians, which can be used to treat both local and distal external and internal illnesses and conditions, including pain. The extra-meridian acupoints include at least 1,655 acupoints, which are not located on 14 major meridians, for the treatments of local issues including pain or even distal illness.[47] Both classical meridian acupoints and extra-meridian acupoints are given specific point-names and originally derived from the *Ashi* points, their locations are relatively clearer, and basically fixed. [33,34] Therefore, classical meridian acupoints and extra meridian acupoints largely overlap with *Ashi* points when treating the neuromuscular-skeletal pain (DN promoters redefined it as "myofascial pain"). An acupoint is not a spot but an area;[48] in a real clinical practice, each needling zone("acuzone") actually represents an area with one or more central points (a zone can be reached by needle horizontally, generally can be a 2-4 cm radius). Thus it is highly likely that acupoints *per se* overlap. TrPs largely overlap with both the classic and extra-meridian acupoints category (except for very few TrPs that are located internally, which are only fitting for manual therapy and not for needling) when treating pain. However, from the definition of TrPs- that they are part of tender points in muscle bellies (in which their locations are not totally fixed, regardless of whether they have or do not have hard or tight nodules), the tender points are considered part of *Ashi* points. It can therefore be concluded that TrPs completely fall within *Ashi* points category.

Definitions from related authors and analyses from independent scholars indicate that, in Western countries, DN does use acupuncture points. TrPs look like a rediscovery of the nature of acupoints, considering that DN has arisen much later than acupuncture (which has had many different schools over time) and DN promoters themselves are either acupuncture professionals or researchers (such as Gunn C, Baldry P, Hong CZ, Ma Y, et al), also, the medical doctors who largely cite acupuncturists' work (such as

Travell J, and Simmons D, especially Travell whom is an acupuncture clinical researcher and had involved in planning acupuncture conferences),[37] except that they use the term DN to replace acupuncture to support the TrPs hypothesis, [23, 24, 18, 36, 44] help to reveal the reasons and factors for the start of DN. [18, 36, 44] From all of this, we conclude that DN has resulted from simply rebranding (1) acupuncture as dry needling and (2) acupuncture points as trigger points by simply using English biomedical terms (in "fascia" hypothesis) in place of their equivalent Chinese medical terms.

In addition, Dr.Travell admitted to the general public that DN is acupuncture when she stated in a newspaper that "the medical way of saying it is 'acupuncture'. In our language that means sticking a needle into somebody", [37] and acupuncture professionals practice DN as acupuncture therapy and there are several criteria in the acupuncture profession to locate TrPs as acupoints.[13] Her words are very clear: TrPs are acupoints.

What Is New About Dry Needling Points (Trigger Points)?

Evidence

Travell and her colleagues summarized the TrPs' characteristics in their popular book *Myofascial Pain and Dysfunction: Trigger Point Manual* as:[13] (1) Pain related to a discrete, irritable point in skeletal muscle or fascia, not caused by acute local trauma, inflammation, degeneration, neoplasm or infection; (2)The painful point can be felt as a nodule or band in the muscle, and a twitch response can be elicited on stimulation of the trigger point; (3) Palpation of the trigger point reproduces the patient's complaint of pain, and the pain radiates in a distribution typical of the specific muscle harboring the trigger point; (4)The pain cannot be explained by findings on neurological examination. The spot is painful on compression and can give rise to characteristic referred pain, referred tenderness, motor dysfunction, and autonomic phenomena.

Dommerholt [3] wrote: "a myofascial TrP consists of multiple contraction knots, which are related to the production and maintenance of the pain cycle."

Chen, et al [49] used magnetic resonance elastography (MRE, a modification of existing magnetic resonance imaging equipment to image stress produced by adjacent tissues with different degrees of tension) to image the taut band of a TrP in an upper trapezius muscle and tried to find the cause of myofascial pain symptoms. Their MRE image of the taut band shows the V-shaped signature of the increased tension (50% greater) compared with surrounding tissues. The study suggests that MRE can quantitate asymmetries in muscle tone that could previously only be identified subjectively by examination. In another study with 65 patients [50] with myofascial pain with taut bands, the findings suggest that while clinicians may overestimate, and current MRE techniques may underestimate, the presence of taut bands, these bands do exist, can be assessed quantitatively, and do represent localized areas of increased muscle stiffness.

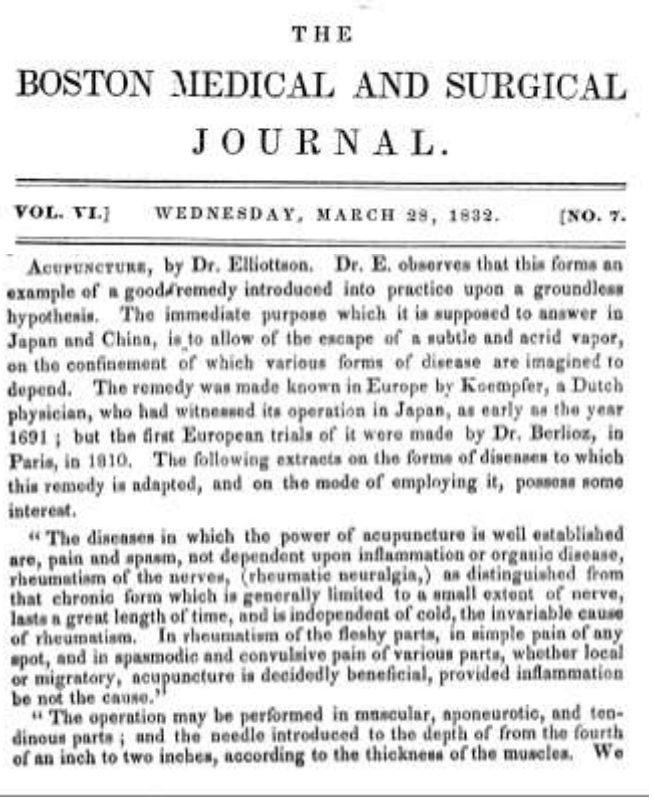
Shah and colleagues [51] reported a biochemistry study which compared the tissue at active TrPs, latent TrPs and absent TrPs spots in the trapezius muscle and in normal gastrocnemius muscle, measuring pH, bradykinin, substance P, calcitonin gene-related peptide, tumor necrosis factor alpha, interleukin 1beta (IL-1beta), IL-6, IL-8, serotonin, and norepinephrine, using immunocapillary electrophoresis and capillary electrochromatography, as well as pressure algometry. The results showed that subjects with active TrPs in the trapezius muscle have a biochemical milieu of selected inflammatory mediators, neuropeptides, cytokines, and catecholamines different from subjects with latent or absent TrPs in their trapezius. These concentrations also differ quantitatively from a remote, uninvolved site in the

gastrocnemius muscle. The milieu of the gastrocnemius in subjects with active TrPs in the trapezius differs from subjects without active TrPs.

Expertise

Clinical study by Anderson and colleagues [38] shows that TrPs, typical locations of tender points, in many patients, were not just soft, but the softest spots in the muscle - the opposite of what most people would expect. "A heterogeneous distribution of pressure pain sensitivity and muscle hardness was found," which indicates TrPs are not necessarily the "tightest" painful spots within muscles.

Baldry [22] indicated that in the West, in 1821 and 1828, Dr. James M. Churchill published the book *A Treatise on Acupuncture,* using the information gathered from Japan and China. Dr. John Elliottson wrote a paper on acupuncture in 1827. "Neither of them employed the complex procedures, techniques, meridian and other theories of traditional Chinese acupuncture as they were trying to avoid the rejection of acupuncture by the medical doctors of the time". Instead, they employed the simplest strategy in acupuncture for the treatment of disease or other conditions—especially neuromusculoskeletal and connective tissue disorders, including musculoskeletal pain—by needling reactive (painful) acupoints (now commonly known as TrPs). This simplest strategy in acupuncture is now commonly known as dry needling.



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ACUPUNCTURE, by Dr. Elliottson. Dr. E. observes that this forms an example of a good remedy introduced into practice upon a groundless hypothesis. The immediate purpose which it is supposed to answer in Japan and China, is to allow of the escape of a subtle and acrid vapor, on the confinement of which various forms of disease are imagined to depend. The remedy was made known in Europe by Koempfer, a Dutch physician, who had witnessed its operation in Japan, as early as the year 1691; but the first European trials of it were made by Dr. Berlioz, in Paris, in 1810. The following extracts on the forms of diseases to which this remedy is adapted, and on the mode of employing it, possess some interest.

"The diseases in which the power of acupuncture is well established are, pain and spasm, not dependent upon inflammation or organic disease, rheumatism of the nerves, (rheumatic neuralgia,) as distinguished from that chronic form which is generally limited to a small extent of nerve, lasts a great length of time, and is independent of cold, the invariable cause of rheumatism. In rheumatism of the fleshy parts, in simple pain of any spot, and in spasmodic and convulsive pain of various parts, whether local or migratory, acupuncture is decidedly beneficial, provided inflammation be not the cause."

"The operation may be performed in muscular, aponeurotic, and tendinous parts; and the needle introduced to the depth of from the fourth of an inch to two inches, according to the thickness of the muscles. We

Figure 2 shows an original acupuncture protocol in Dr. Elliottson's publication, titled Acupuncture. The paper was republished in Boston Medical and Surgical Journal, Vol. VI, March 28, 1832 No.7, pp112. It stated: "The [acupuncture] may be performed in muscular, aponeurotic, and tendinous part; and the needle introduced to the depth of from the fourth of an inch to two inches, according to the thickness of the muscles." Photo provided by Yong-ming Li.

Gunn, et al [23] in 1976 proposed that "as a first step toward acceptance of acupuncture by the medical profession, it is suggested that a new system of acupuncture locus nomenclature be introduced." Gunn and his colleagues started to use the term motor points (TrPs' synonym) as a substitute for the term acupoints in their publication. [24]

Jin, et al [12] stated that "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 and whether by either western neuro-anatomy or traditional Chinese medicine (TCM) meridians……the mechanism of DN and acupuncture are one in the same……which achieves the efficacy via neural reflex arcs." "De-meridian (where the meridian theory is not required for acupuncture and other related modalities) is not equivalent to de-acupuncture (modalities derived from but different from acupuncture)……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 filiform needles to stimulate TrPs, it is in the scope of acupuncture..…. to protect the public safety of patients seeking acupuncture, we refute the de-acupuncture claim by DN educators."

Other Facts

The Council of Colleges of Acupuncture and Oriental Medicine (CCAOM) [4] states: "'DN' has resulted in redefining acupuncture and re-framing acupuncture techniques in western biomedical language. Advancement and integration of medical technique across professions is a recognized progression. However, the aspirations of one profession should not be used to redefine another established profession……It is the position of the CCAOM that these treatment techniques are the *de facto* practice of acupuncture, not just the adoption of a technique of treatment."

AAPAS Comments

It is clear that Dr. Travell, Dr. Gunn, Dr. Baldry and others promoted TrPs (DN Points) and DN through re-translating and rebranding acupoints, acupuncture techniques, in one form of biomedical language in "fascia" hypothesis (by removing terminology of traditional Chinese acupuncture) while acupuncture has many different classical and modern schools, including using traditional Chinese acupuncture languages and various biomedical languages. DN is an over-simplified version (or say, simplest version) of acupuncture derived from traditional Chinese acupuncture except for emphasizing biomedical language when treating neuromuscular- skeletal pain (DN promoters redefined it as "myofascial pain"). TrPs belong to the category of *Ashi* points in traditional Chinese acupuncture, and they are not a new discovery. Among acupuncture schools, DN practitioners emphasize acupuncture's local response while other acupuncturists pay attention to the responses of the local and distal locations, incorporating the whole body.

The "difference" in DN points, or TrPs, is that the studies of TrPs try to focus more on local anatomy (especially hypothesis on "fascia") while former studies of acupuncture extensively focus on the activities of the central nervous system and hormones changes. Travell, et al systematically summarized the 255 myofascial TrPs on 144 muscles, their manual therapies, and needling techniques (under the term DN, actually TrP acupuncture). It triggers scholars to pay more attentions to the research of local anatomy, biophysics, biochemistry, and imaging of acupoints. Actually there has been more research on the different schools of acupuncture, comparisons among such needling therapies, the relationship among them and the evolution processes of acupuncture globally. It also encourages schools (colleges) of the acupuncture profession to pay more attention to contemporary developments of acupuncture (in different

names, terminologies). Acupuncture using biomedical languages is more readily to be accepted by the main medical stream and the general public with western education background.

However, it is also clear that the four characteristics of TrP mentioned by Dr. Travell are not a consensus of all DN scholars and professionals. The taut band, nodule, or local twitch response are probably not a necessary criteria of a TrP, except TrP is a tender point. [33, 38]

Is Dry Needling a Manual Therapy?

Evidence

The Federation of State Boards of Physical Therapy[52] (FSBPT) stated that DN is also known as intramuscular manual therapy. Beginning in 2009, the American Physical Therapy Association had recommended the use of the term "intramuscular manual therapy" (IMT) to describe the use of acupuncture needles by physical therapists, however, since late 2011, the organization advocates using dry needling as the term of choice.

A commercial DN educator, Kinetacore,[53] explains that "IMT…the easiest way to think of this treatment is to relate it to a massage. The knots in your muscles that massage therapy often targets are similar areas of treatment for IMT (DN). Often times these knots live at a deep level that fingers and hands just can't get to. Those knots are the goal of IMT. The needles used are very fine, thin, and flexible needles that are quickly tapped into the muscle and causes those knots to decrease, the muscle to loosen, and healing to begin which ultimately decreases pain and increases proper function."

Dommerholt [3] wrote: "DN is an invasive procedure in which a solid filament needle is inserted into the skin and muscle directly at a myofascial TrP".

Sportscare Physical Therapy [54] states that "IMT is an invasive procedure in which a solid filament needle is inserted into the skin and muscle directly at a myofascial trigger point. A myofascial TrP consists of multiple contraction knots, which are related to the production and maintenance of the pain cycle."

Expertise

A medical dictionary [55] defines "manual therapy" as "[a] collection of techniques in which hand movements are skillfully applied to mobilize joints and soft tissues." (Medical Dictionary, © 2009 Farlex and Partners)

Ferguson, [55] Attorney General of Washington State, states that "DN is not 'manual therapy' as we understand the term".

The National Center for Acupuncture Safety and Integrity (NCASI) [56] states that "physical therapists contend that their right to practice DN arises by virtue of their right to practice manual therapy. The term *manual therapy* simply means a remedial treatment consisting of manipulating a part or the whole of the body by hand. It certainly does not include the practice of surgery (severing or penetrating tissues) in any form. Dry needling is acupuncture, not manual therapy".

In regulations of veterinary medicine, acupuncture procedure is often classified as a type of surgical procedures.[57]

"Surgery" is defined by the American Medical Association (AMA), in part, as "the diagnostic or therapeutic treatment of conditions or disease processes by any instruments causing localized alteration or transposition of live human tissue which include lasers, ultrasound, ionizing radiation, scalpels, probes, and needles." [58] The insertion of acupuncture needles falls well within what is medically considered to be "surgery" by the AMA.

The American Academy of Physical Medicine and Rehabilitation states (AAPM&R) that "DN is taught in American acupuncture schools as a form of treatment for individuals using acupuncture needles. DN is an invasive procedure. Needle length can range up to 4 inches in order to reach the affected muscles. The patient can develop painful bruises after the procedure and adverse sequelae may include hematoma, pneumothorax, nerve injury, vascular injury and infection". [59]

AMA policy on DN states that "DN is indistinguishable from acupuncture", physical therapists and other non-physicians practicing DN should – at a minimum – have standards that are similar to the ones for training, certification and continuing education that exist for acupuncture. It emphasizes that "Lax regulation and nonexistent standards surround this (DN) invasive practice. For patients' safety, practitioners should meet standards required for licensed acupuncturists and physicians". [60]

Other Facts

Zhou, et al [8] reviewed DN history and compared the theories and techniques of DN and acupuncture and concluded that DN is a kind of Western acupuncture for treating myofascial pain. DN as a subcategory of acupuncture uses the same needles, similar stimulating points, the same or similar needling techniques, and involves the same biologic mechanisms.

Peng, et al [9, 10] compared four aspects of DN with acupuncture: the points of the needle insertion, needles, needling techniques, and therapeutic indications. They concluded that DN can be called TrP acupuncture. It is an integral part of the traditional acupuncture.

Zhu and Most [11] reviewed four features of needling techniques and explored the similarities and differences between DN and acupuncture. The authors concluded that DN is one type of acupuncture when solid filiform needles are used.

AAPAS Comments

DN is a subset of acupuncture, also called TrP acupuncture. As the term indicates, it involves the procedure of piecing skin and other tissues of the body with different sized needles and is an invasive therapy instead of a manual therapy.

For patients' safety, practitioners should meet the standards required for licensed acupuncturists and physicians, as American Medical Association, et al. have indicated.

Summary of Dry Needling

1. Academic perspective

In terminology, dry needling (DN) is a synonym to acupuncture, just a different English translation from the original Chinese term 针刺 (Zhen Ci). In China, DN is a common name of acupuncture for over 200 years.[11,17] In West, DN has become popular since 1980s, especially since late 1990s, for replacing the term acupuncture by some traditional and medical acupuncturists, medical doctors, as a step "toward acceptance of acupuncture by the medical profession". [23,36, 61]

DN is the use of dry needles alone, either solid filiform acupuncture needles or hollow-core hypodermic needles, to insert into the body for the treatment of muscle pain and related "myofascial" pain syndrome; a.k.a. intramuscular stimulation, trigger points (TrP) acupuncture, TrP DN, myofascial TrP DN, or biomedical acupuncture. In West, DN is a form of over-simplified acupuncture using biomedical language in treating "myofascial" pain, a contemporary development of a portion of Ashi point acupuncture from traditional acupuncture. It seeks to redefine acupuncture by reframing its theoretical principles in a Western manner. Current DN protocol using filiform acupuncture needles is exact same as the acupuncture used by medical doctors in West since 1821, and same as part of Ashi point acupuncture in traditional acupuncture used in East over 2,000 years. [36,61] It is a medical therapy and a form of acupuncture practice, not just a technique on inserting a dry needle.

For the business of the commercial seminars, many DN educators have covered up their acupuncture background, and have intentionally denied the fact that DN is acupuncture. However, in in other situations, they did tell the truth. The Mother of DN, Dr. Janet Travell admitted to the general public that DN is acupuncture when she stated in a newspaper that "the medical way of saying it is 'acupuncture'. In our language that means sticking a needle into somebody", [37,61] and acupuncture professionals practice DN as acupuncture therapy and there are several criteria in the acupuncture profession to locate TrPs as acupoints.[13]

2. The Problems DN caused

Firstly, DN promotors have caused great confusion to academic scholars, healthcare professionals, administrators, policymakers, and the general public. As acupuncture professionals and researchers, they clearly know DN is acupuncture-just in different name. However, some of them made stories to fool people DN is different from acupuncture, and "discovered" or "developed" by themselves, or at least a "rediscovery" by western medical doctors. For example, Dr. Travell, a clinical researcher involved with acupuncture work and used to participate in the planning of acupuncture conferences [37,62] described a complicated DN "discovery processes" in her books--from injecting therapy with local anesthesia medication to inserting injecting needle without medication--performing injecting needle DN, to using acupuncture needling; and used TrPs to rebrand acupoints. In fact, before had done all of these, in a newspaper she admitted to the general public that DN is acupuncture. This actually causes a problem in their academic integrity, although these DN promoters and educators are known scholars.

Secondly, in order to promote their "own" academic theory, commercial education business, and other objectives, DN educators have developed commercial courses for continuing education taught "DN techniques" to a large number of students, including PTs and other customers

without acupuncture credentials in non-regulated seminars. While PTs programs do not include in any content in needling therapy,[63,64] the national organizations of PT profession, such as APTA[1] and FSBPT[52] started to support DN around 2010, currently there are more PTs involving the DN teaching and practice than other professionals.[53,54] Not recognized DN as a part of acupuncture, PT professionals, nevertheless, made a great effort to promote DN practice in the past ten years in the U.S. While elevating their education level to a doctoral degree, PTs as a profession probably want to expand their scope of practice and take over DN, even "the physiological basis for DN treatment of excessive muscle tension, scar tissue, fascia, and connective tissues is not well-described in the literature."[1] As noted, DN educators in both continuing education and in schools are often licensed acupuncturists.

Thirdly, DN has mainly been taught in continuing education level courses of 20-30 hours (proposed to increase to 54 hours in future in some program).[1, 53,54,65,66] This lack of adequate professional training increases the risk of patient's injury and can be a threat to public health and safety. Reports of serious injuries associated with DN or acupuncture by PTs are not uncommon.[67-70] Under current healthcare regulations and system, a patient has no way to know if his or her DN practitioner has sufficient training and what is the risk of being injured when treated by "dry needlers" who received minimal training. More often, patients are not likely to know the practitioners' experience level when DN technique is applied; nor will the patient know if the PT chooses to use needles for purposes beyond typical DN practice. Dr. David Simmons, a pioneer of TrPs, stated: "Your problem is largely one of semantics so the simple answer is to change the playing field and the semantics that go with it. If you... use the different terminology you leave other side without an argument".[71]

How can anyone practices acupuncture under the name of DN and say it is not acupuncture therapy? The public has a right to expect certain hard-earned standards of accredited education and licensing for those professionals who are using acupuncture needles on them therapeutically. In most of the states of the U.S., for becoming a certified MDs acupuncturist, physician or medical acupuncturists (after they get their MD license after their western medical education and at least three years of residency) are required to get a minimum of an additional 300 educational hours in a board -approved acupuncture training institution (American Board of Medical Acupuncture, ABMA) and have 500 cases of clinical acupuncture treatments; For licensed in acupuncture, the candidates are required to attain an average of 3,000 educational or training hours via an accredited school or program (such as The Accreditation Commission for Acupuncture and Oriental Medicine, ACAOM). [59,60,65] So far, there is no comparable requirements and regulations for PTs to study needling therapy and perform DN in the U.S. [18] As noted that, even Dr. Travell opposes PTs to perform DN. [62]

In addition to public risk, PT dry needlers' denial of acupuncture recognition has created a big tension between the acupuncture profession and PTs, as well as among other professionals who are seeking to provide acupuncture by calling acupuncture in a different name. If law-makers and regulators are to decide to allow PTs and others to provide acupuncture to citizens based on only 20-30 hours of training, they can certainly do that. The historic record shows however that these lawmakers should know that they are granting them the right to practice acupuncture. [18]

3. Our Position

In short, the evidence shows clearly that currently, at least in the U.S., DN practitioners intent to bypass the legal regulations to practice acupuncture in the name of DN.[18,44] At last, here is a quote of the position letter on DN from American Medical Association (AMA):

"DN is indistinguishable from acupuncture", physical therapists and other non-physicians practicing DN should – at a minimum – have standards that are similar to the ones for training, certification and continuing education that exist for acupuncture. It emphasizes that "for patients' safety, practitioners should meet standards required for licensed acupuncturists and physicians".[60]

Conflict of Interests

None.

Author Contributions

All authors participated in the planning, writing and proofread, and contributed equally and served as co-first authors.

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