Developments of Nonacupoint Needling in Japan

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Multiple posterior-to-anterior needling for the upper trapezius was especially innovative back in 1865. Source: Digital Collection, National Library of Japan.

INTRODUCTION

THE FUNDAMENTAL DIFFERENCES between nonacupoint and classic acupoint needling are in their methodology and clinical applications. Nonacupoint needling is mainly used for treating musculoskeletal pain and usually is applied to target skeletal muscles where tenderness or tightness is palpable and is associated with increased contractile tension or reduced elasticity in muscular tissues at rest.¹ Nonacupoint needling is seldom applied to the top of the skull or sternum, where no muscular tissues are located. Muscle tenderness and tightness as pathologic changes usually can be viewed and monitored via ultrasound imaging (Fig. 1). Conversely, the existence of classic acupoints is not well-supported by modern human anatomy.²

FINE-NEEDLE AND GUIDING TUBE

Ancient acupuncture needles were made of animal bone, copper, and iron; and were quite thick, stainable, and rigid by modern standards. Thus, needle insertion was not deep for the sake of patient safety. Fine and flexible needles were initially developed by Isai Misono (1557–1616 AD), using materials of gold and silver. Stainless-steel needles were not produced until after World War II.³ The insertion guiding tube was created by Waichi Sugiyama (1614–1694 AD) using bamboo reeds.⁴ Use of the fine-needle and guide tube together helps minimize the discomfort of needle penetration and maintain perpendicular or other desired insertion angles to the body surface, thus significantly facilitating more-precise intramuscular (IM) needling.

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FIG. 1. Ultrasound imaging of upper trapezius muscle. *Left:* A defined hypoechoic focal area (the ultrasonic wave did not reflect back fully to the ultrasound transducer) that corresponds with palpable tenderness and suggests a chaotic and slow vascular network. *Right:* After needling, tenderness was reduced and the hypoechoic area was less visualized, suggesting a less restrictive vascular network.

FIRST PUBLICATION OF NONACUPOINT NEEDLING

Toyosaku Sakai (1815–1878 AD) wrote a book called *Secret Methods of Acupuncture* in 1865,⁵ in which he not only described classic acupuncture and herbal medicine but also described nonacupoint needling.⁵ The book has illus-

trations that are quite modernized and somewhat three-dimensional. In the figure at the beginning of this Photo-essay, two selected illustrations demonstrate the clear approach for locating the tenderness over the upper trapezius muscle and horizontal needling for the muscle, which is rarely seen in vintage Oriental medicine books.⁶

IMPROVED NEEDLING DEVICE

Physician Yoshio Nakatani, MD, PhD (1923–1978 AD), developed the *Ryodoraku* diagnosis and treatment during the late 1940s. The word *Ryodoraku* can be translated literally to “good conducting connections of acupoints.” *Ryodoraku* treatment is performed by IM direct current stimulation via inserting needles into classic acupoints or nonacupoint where the skin electrical resistance is lower than the adjacent dermis or muscles with tenderness and stiffness.⁷ Nakatani also invented a device called a *Showa* or *Ryodoraku* needle injector, which provided mechanical advantages over the original needle guide tube (Fig. 2).

FIG. 2. By attaching a standard acupuncture needle to the Ryodoraku needle holder, it forms an elongated needle handle and allows the practitioner to accurately perform in-and-out insertion at given angles without removing the guide tube at the top of the skin for penetrating abnormal muscle tissues. When holding the elongated handle, the real-time proprioceptive feedback the practitioner’s fingers can sense allows for fine-tuned movements of the needle tip over very short distances, thus facilitating judgment of precision of needle placement as well as tissue uniformity and type, such as normal muscle-versus-contraction.

DISCUSSION

Nonacupoint needling and dry needling are somewhat interchangeable terms. In the United States, a debate is continuing among chiropractors, physical therapists and acupuncturists about the practice of dry needling. The debate is likely rooted in different historical and clinical

points of view and even commercial considerations among health professionals. This debate has not been seen in Japan in which there is a long history of Oriental medicine in the country and only physicians and acupuncturists are permitted to use acupuncture for patients; about 8% of these physicians practice the art and 80% of them use the *Ryodoraku* approach.^{8,9}

SUMMARY

Nonacupoint needling can be defined as needle placement for treating patients that does not coincide with classic acupoints. Based on the above, nonacupoint needling has been developed as a simplistic and direct therapeutic tool for practitioners who pay less attention to classic acupoints and meridians. The needling is intended to promote remodeling of pathologic musculoskeletal tissues, rather than to restore disrupted internal energy flow as is recommended in the concept of Oriental medicine.

AUTHOR DISCLOSURE STATEMENT

The author declares that no competing financial interests exist.

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