

## ***Gua Sha: Another Form of Mechanical Load***

Warren Hammer, MS, DC, DABCO

Every technique that creates compression or tensile stretch to soft tissue creates a mechanical load that is necessary for tissue change. *Gua sha* represents another form of mechanical load on soft tissue that claims healing results and, like all other soft-tissue methods, begs for research to prove its value. Arya Nielsen, PhD, adjunct faculty in the Department of Integrative Medicine at New York Beth Israel Medical Center, [Continuum Center for Health & Healing](#), and a strong proponent of *gua sha*, wrote an interesting article in the January 2009 issue of the *Journal of Bodywork and Movement Therapies (JBMT)*.<sup>1</sup> She states that often the literature incorrectly describes the results of *gua sha* as causing battery trauma, bruising, burns, dermatitis, pseudo bleeding and even hematoma.

Although *gua* means to "scrape" or "scratch" in Chinese, the skin always remains intact and there are no abrasions. *Sha* represents the "transient therapeutic petechiae." The extravasated blood appears as red macula and fades to ecchymosis immediately, blending into an ecchymotic patch. The scraping reveals blood stasis and its use removes blood stagnation that is considered pathogenic, thereby promoting normal circulation and metabolic processes. *Gua sha* lets blood from the tissue and [is not let from the skin](#).<sup>2</sup>

This method originated in Asia and is used today in East Asian medicine and [by acupuncturists](#). Nielsen mentions its use for colds, flu, fever, heatstroke, asthma, bronchitis and emphysema, as well as musculoskeletal problems including fibromyalgia to severe strain. Improving blood stasis and *sha* may even be significant in asymptomatic subjects who are considered healthy.

A recent study using laser Doppler imaging was used to make sequential measurements of the microcirculation of surface tissue [before and after gua sha treatment](#)<sup>3</sup> in order to relieve pain. The result was a fourfold increase in microcirculation for the first 7.5 minutes following treatment and a significant increase in surface microcirculation during the entire 25 minutes of the study period following treatment. There was a decrease in myalgia not only locally but also in sites distal to the treated areas. The authors stated that the distal area of relief was not due to a distal increase in microcirculation and asserted, "There is an unidentified pain-relieving biomechanism associated with *gua sha*."

Recent theories based on tensegrity and the fascial continuum help to explain distal results from localized mechanical load. Ingber, who has written much on [our tensegrity structure](#),<sup>4</sup> demonstrates how living cells and tissues sense and respond to mechanical stresses and in the rearrangement of the structure become mechanochemical transducers, whereby mechanical signals create chemical responses affecting local and distal parts of our structure.

Fibroblasts are the chief cell in the extracellular matrix and reproduce the extracellular matrix upon being loaded; [it is thought by Langevin, et al.](#),<sup>5</sup> that the existence of a cellular network of fibroblasts within loose connective tissue may have considerable significance, as it may support as-yet unknown bodywide cellular signaling systems. She states that fascia may serve as a bodywide mechanosensitive signaling system with an integrating function similar to the nervous system.

Regarding *gua sha* and GT, increasing the microcirculation may stimulate platelets which release growth factors related to the healing of tissue.

Graston Technique (GT) has been compared with *gua sha*, and I have even heard some say that GT adopted the *gua sha* concept. GT was initially used on a postsurgical knee. It is extremely doubtful that the discoverers were at all familiar with *gua sha*, but even if they were, the GT application is significantly different. GT research has been directed toward the musculoskeletal system and its effect on various soft-tissue conditions. New studies are continually appearing demonstrating how it may be affecting soft tissue. It has its own protocol and uses instruments of different weights, shapes, and sizes to conform to the bodily contours. Its stainless-steel vibratory effect is used to detect restricted areas after functional tests are performed to determine the involved location.

While both methods can create petechiae, the stroking is not performed in the same manner. GT often achieves results without creating any petechiae at all. GT uses at least seven types of strokes, while *gua sha* repeats a stroke in one direction about 4-6 inches long specifically to create "therapeutic" petechiae.<sup>1</sup> A variety of instrument angulations and pressures may be used in GT depending upon the area of the body treated.

Doctors trained in both methods realize the vast differences. Both methods have their place and there is some obvious overlap, but the differences between the methods are significant. At present, all soft-tissue loading methods are still in their infancy regarding research as to how they affect our structure and function. [Einstein referred to a unifying theory of the universe](#). Hopefully, there might someday be one for soft tissue.

## References

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