



The effects of the Gua Sha technique (western view) on the flexibility of the posterior chain: series of cases

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ABSTRACT

Introduction: The Gua Sha technique is a method from the traditional Chinese medicine (TCM), having its origins in the prehistory, where they had the habit of rubbing their bodies to relieve symptoms of pain. The term “gua” means to scrape, brush, scratch and the term “Sha” has a more complex meaning such as sand or dirt. In China, this technique was and still is very used by the peasants. Gua Sha’s great effects exist by its simultaneous action on the skin, in the connective tissues, in the lymphatic system, in the muscles, blood vessels and the internal organs. **Objectives:** To verify the Gua Sha technique’s (western view) use in the flexibility recovering of sedentary men. **Methods:** This study had as sample three men with average of $28,66 \pm$ years, height of $176\text{cm} + = 9,29$, weight of $100,3\text{kgs} \pm 15,05$. At first, the study was conducted through the patient’s anamnesis, besides the checking if the patients didn’t have any limitation to perform the evaluation tests. Then, the individuals were submitted to the gua sha technique’s treatment in all their posterior chain, only in one session. **Results:** After the treatment session using the Gua Sha, the patient’s improvement was notorious. Analyzing the data that shows one gain in about 33° of the lumbar back’s amplitude evaluated by the goniometry and flexibility, through the fingertip-to-floor test, in a short treatment time. In the fingertip-to-floor test, the patients were classified with reduced flexibility, because they stayed more than 10 cm away from the ground, after the technique’s use all patients were classified as having regular flexibility, since they touched the third finger on the floor. **Discussion:** The Gua Sha technique is very used in the eastern culture for muscular and breathing pains, so this article demonstrates one more accomplishment of the technique, the flexibility gain with satisfactory results, an important factor was the use of only one series obtaining these results, becoming one more technique to add to a combined treatment, aiming the patient’s improvement. **Conclusion:** This way we conclude that the Gua Sha technique is an excellent tool for the myofascial induction, for the gain of muscular mobility and flexibility of the posterior chain in a short period of treatment time.

Key-words: Gua Sha, Myofascial, Flexibility.

INTRODUCTION

The Gua Sha technique is a method from the traditional Chinese medicine (TCM), having its origins in the prehistory, and its practice is also seen in indigenous communities that had the habit of rubbing their bodies to relieve pain symptoms. This is one of the most common techniques in the TCM.⁽¹⁾ It consists in using the therapeutic scraping through jade stone, porcelain spoon, buffalo horn and other means, to through stimulation in specific areas produce local therapeutics effects and to restore the organic functions, being able to be used as a diagnostic method.⁽²⁾

The term “Gua” means to scrape, to brush, to scratch and “Sha” has a more complicated meaning, such as sand or dirt. In China, this technique was and still is very used by the peasants. In Hong Kong, there is a high prevalence of the technique usage where 74% of people say that use it for breathing problems, pain and other diseases such as fever, infections, dizziness, diarrhea, vomits and constipation.

The usage has a prevalence of 22,7% through the whole year and 6,6% use for a month during a year, this study examined 3209 people from Hong Kong, to verify the prevalence and use of the Gua Sha.⁽³⁾

The diseases that may be treated in the Chinese sphere is wide, highlighting the rheumatism, the headaches, chronic fatigue, back and cervical region pains, sciatic, digesting problems, asthma, metabolic disorders, breast angina, hypertension, immunological system deficiencies, according to Hong Kong’s population that uses it.⁽⁴⁾ In the literature, it is possible to find researches about treatments of neck pains, low back pains, headaches, increase of blood circulation in the treated area, improvement in mother’s breastfeeding by the better breast engorgement, better hormonal control in hyperthyroidism, showing always the best results in comparison to other control groups.^(5,6,7,8,9,10,11)

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Gua Sha's beneficial effects are because of its simultaneous actions on the skin, in the connective tissues, in the lymphatic system, in the muscles, blood vessels and the internal organs. The simple gesture of scraping has effects as great as massages, moxibustion, lymphatic drainage, oxygenic therapies and stimulation of the immunological system.^(5,7,9,12)

During the Gua-Sha treatment, a special oil is placed over the body, on the region to be treated. The skin is scraped until it presents light hyperemia. The areas that show energetic instability show, besides the hyperemia, a deeper pigmentation that, according to the TCM, indicate the stagnation of vital fluids (Xue – blood) e energy (Qi) from the meridians, the so called channels of body energy.⁽⁴⁾ The patient doesn't feel pain during or after the treatment, but in some cases a bruise appears over the area, the pigmentation fades in a few days without leaving traces.⁽¹³⁾

However, in the western culture this pigmentation may be misunderstood, that's what an Italian study highlighted⁽¹⁴⁾, about the forensic implication of the technique, because of the pigmentation that lasts on the skin for a few days, which may be considered a bodily injury. Because of the bruise that occurs by the scraping on the skin, a safety pattern was established to avoid skin diseases transmission and the procedure's contamination, so it is recommended to always sterilize the model of Gua Sha used.^(15,16)

Only one single work in the literature shows an accident with the technique's usage, though the accident happened more because of professional incapacity than because of the technique itself, knowing that he made pressure against the patient's hyoid, and this mechanism is not described in the technique, causing an injury in his epiglottis.⁽¹⁷⁾

In Brazil, with a western view, the professor Paulo Moraes created a Gua Sha with thicknesses and specific shapes for each region of the human body, aiming myofascial tissues and muscular chains treatment.

By the exposed, the hypothesis of this study is that the Gua Sha technique (Myofascial induction, western view) recovers the flexibility and elasticity of the posterior muscular chain, and its justified by the void of researches in this area. This study had as objective to evaluate the effects of the Gua Sha on the skin over the flexibility of the posterior muscular chain.

DESCRIPTION OF THE CASE REPORT

It's about a describing and quantitative study. To accomplish this research the principles presented in the resolution 466/12 from Brazilian's National Health Council (CNS) were followed, the ones that regulate the researches involving human beings. The selected patients read and signed the Term of Free and Clarified Consent (TFCC).

Samples

In the study there were 5 male individuals, with age average of 28,66±16,07 years, height of 176cm±9,29, weight of 100,3kgs±15,05, sedentary, who didn't show any kinds of

orthopedic anomalies that could not allow the accomplishment of the evaluation tests, in which they presented themselves voluntarily, from posters in the university campus, to physical therapy treatment.

Procedures

The treatment consisted in a single session of approximately ten to fifteen minutes, however we propose that the session shouldn't have a determined time, taking in consideration that the technique must be performed while it's necessary, according to the therapist impression of the patient's relaxing sensation. The treatment used was the Gua Sha technique (Myofascial induction, western view), with a western vision of the technique, already described, that consists in eight steps: 1 – manual contact between the therapist and the treated area, 2- instrument's handhold applying a little pressure, 3 – fascial tension, 4 – muscular drawing, 5 – muscle micro tensile, 6 – transversal tension from the muscle through the instrument and the Gua Sha, 7 – inter tissue slip following the way of the muscular fibers, 8 – vasodilator oil slip from the region until the visualization of light hyperemia. The used instrument was a stainless steel Gua Sha (Figures 1 and 2), exclusively produced by Professor Paulo Moraes, since there are many models.

The posterior muscular chain flexibility was measured through the 3rd fingertip-to-floor⁽¹⁸⁾ test, it was used to evaluate the flexibility of the posterior chain through the goniometry (with one universal goniometer from the brand Carci®), since it consists in a high validity and reliability test, and also because it's a low-cost test, with a notorious practical applicability.⁽¹⁹⁾ The test was applied according to Magnusson et al.⁽²⁰⁾ The subjects were asked to keep their knees completely extended, and, from that point, to bend their bodies on the floor's direction, with arms and head relaxed. The final moment of the bending was indicated by a muscular tension sensation that caused great ischiotibial discomfort and, in that moment, the measures were taken. Individuals that could reach a distance less than 10cm to the floor or to touch the floor were classified as those with regular flexibility, and those who stayed more than 10cm away from the floor were classified as with reduced flexibility. The distance from the fingers to the floor (in centimeters) was measured by tape-measure, having as its bases an already known linear measure placed in the same visual field of the individuals. The measured angles were from the lumbar back region, with the goniometer's fix arm, placed perpendicularly to the ground on the same level of the iliac crest; meanwhile the mobile arm was placed over the medium axillar line of the body, after the movement had been completed.

Statistics Analysis

The database, as well as the graphics and tables, were built in Microsoft Excel 2013. For the data analyze the software BioEstat 5.0 was used, being used the test Student's t to

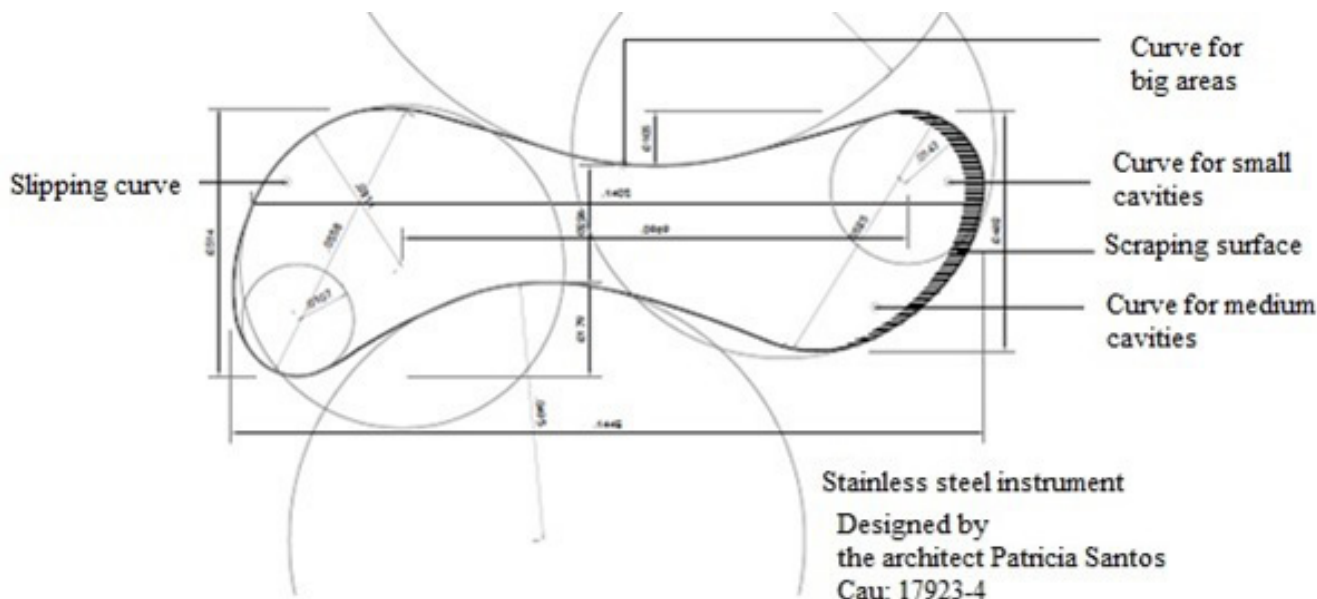


Figure 1. Project Model



Figure 2. Gua Sha Model (western view)

analyze the statistical importance of the obtained results, being considered the alfa importance level 0.05 (5%).

RESULTS

The Gua Sha technique treatment results were satisfactory, taking in consideration that only one session was conducted, therefore the data obtained in table 1 show a great gain of flexibility, through the goniometry and the fingertip-to-floor test, in a short period of treatment. In the goniometry we observed that individuals won a little bit more than 30° of movement, seen that the goniometry of the lumbar back is of 0-95°¹⁸, so the individuals got close to the complete movement’s amplitude. In the fingertip-to-floor test, the individuals were classified as with reduced flexibility, because they stayed more than 10cm away from the floor, and after the use of the technique they were classified as having regular flexibility, with the great majority of individuals having reached the third finger on the ground, and both tests had a significant statistical difference, since both present p>0,05.

Table 1. Comparison between the pre and after treatment based on the functional analysis.

| Test | Pre | After | P value |
|--------------------|-----------|------------|---------|
| Goniometry | 55°±4.08 | 88°±2.51 | 0.086 |
| Fingertip-to-floor | 20cm±1.54 | 0.6cm±0.57 | 0.072 |

DISCUSSION

The Gua Sha technique, that comes from the TCM, such as many other techniques, has a significant void of studies,^(5,6,8,9,10) and the few about this subject having approached only the relief of pains such as the lower back pain, the neck pain, migraine and improvement in breast engorgement, so our study shows itself as one of the firsts to analyze the flexibility recovery gains, by the technique’s usage.

The pain studies reported that the technique’s use lowers the need of medication to relieve it,⁽⁸⁾ being considered as a popular form of home medicine by the Chinese culture, for treating both orthopedic and breathing pathologies, and also used as an ancient technique for diseases diagnose.^(21,22)

This article proposes the use of the technique through all the muscular chains, since they are circuits in continuity of direction and plans, through which come the organizing strength of the body, that aims to keep the individual in balance, with more comfort and spending less energy.⁽²³⁾

The importance of the muscular chains is principally on the level of the pelvic waist, seen that most parts of it cross this area.⁽²⁴⁾ So being important the treatment since the sub occipital until the plantar fascia, in the posterior case, but the same thought must be done to the other chains.



A really important fact brought in the research was the use of one single session, and even like this the patients obtained satisfactory gains, what with myofascial release^(24,25,26) and stretches^(27,28,29) techniques we only obtain after a certain number of sessions, being this an important factor both to the therapist and to the patient, seen that their objective is to solve the patient's complaint as fast as possible.

CONCLUSION

This way we conclude that the Gua Sha technique (Myofascial induction, western view) is one excellent tool for the myofascial induction, to the posterior muscular chain's mobility and flexibility gains, however our work doesn't have the objective to search for a technique better than the others, but to present one more tool in the vast number of manual techniques that exist in the literature, always looking for the best service and the patient's satisfaction. Then it's of great value the techniques usage together, like the Gua Sha and osteopathy, chiropractic, acupuncture and others, knowing that one technique completes the other, making a combined therapy, and also more studies are needed analyzing the Gua Sha technique (Myofascial induction, western view), both in the eastern and the western view and verifying many pathologies.

AUTHORS' CONTRIBUTIONS

M.S.M.B - plan and development; data collect e treatment; analysis and interpretation; redaction. P.H.M - analysis and interpretation; critical review

Conflict of interests

No conflicts of interest.

AUTHOR DETAILS

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