

**THE EFFECTS OF THE GUA SHA TECHNIQUE (WESTERN VIEW) ON THE
RECUPERATION OF FLEXIBILITY OF THE POSTERIOR CHAIN IN
PARKINSON: CASE STUDY**

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ABSTRACT

Introduction: The technique of Gua Sha is a method of traditional Chinese medicine (TCM), which has its origins in prehistory. In China, this technique was and is widely used by farmers. The beneficial effects of Gua Sha are due to simultaneous action on the skin, connective tissues, the lymphatic system, muscles, blood vessels and, lastly, the internal organs. **Objectives:** To present another new tool in the vast number of manual techniques that exist in the literature, always seeking the best care and patient satisfaction. **Methodology:** This study was subject to an elderly individual, carrier of Parkinson's disease. The study was conducted primarily by the patient's history. Later the individual was classified within the Hoehn and Yahr scale, being prerequisite to be between stages 1-3 of the disease. **Results:** After one treatment session using the Gua Sha, was notorious the patient improves. The data demonstrate that a gain flexibility by using a goniometer and test fingertip-to-Floor. In the test fingers to the ground, the patient was classified with reduced flexibility after the use of the technique the patient was classified with normal flexibility. **Discussion:** The studies analyzing pain, they report that the use of this technique reduces the medicine usage for relief thereof. Compared with other methods, to gain mobility and flexibility, such as hydrotherapy, exercise and pop, all methods show great improvement, however, point out that the Gua Sha (western view), offers a similar result, but in a time, less space. **Conclusion:** Thus we conclude that the technique Gua Sha (western view) is an excellent tool for myofascial induction to gain mobility and muscle flexibility of the posterior chain in Parkinsonian patients

Keywords: Gua Sha, Myofascial, Parkinson.

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 TCM¹. 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 method².

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 Sha³.

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 it⁴. 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}.

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 energy⁴. 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 traces¹³.

However, in the western culture this pigmentation may be misunderstood, that's what an Italian study highlighted¹⁴, 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 epiglottis¹⁷. 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.

Parkinson's disease (PD), also known as shaking palsy or parkinsonism Idiopathic is a chronic degenerative disease of the central nervous system, characterized by the deterioration of the substantia nigra, with progressive loss of pigmented dopaminergic neurons, and the presence of neurons containing bodies Lewy^{18, 19}. It was described for the first time in 1817 by the english physician James Parkinson clinical manifestations are complex and include motor abnormalities that cause tremor at rest, muscle rigidity, bradykinesia and instability postural^{20, 21}.

The loss of mobility, caused by bradykinesia, muscular rigidity and the plastic hypertonia, characteristic of extrapyramidal lesions, causes a great loss of PD carrier flexibility may aggravate both symptoms, therefore it is always important to physical activity and use of techniques to gain flexibility, such as myofascial release and stretching, always with the aim to keep this muscle in atividade²².

By the exposed, the hypothesis of this study is that the Gua Sha technique (western view) recovers the flexibility and elasticity of the posterior muscular chain, thus we analyze the technique in Parkinson's disease, in view of the great loss of flexibility that this population suffers 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 in a Parkinson's patient.

METHODOLOGY

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

This study is subject to an elderly individual, Parkinson's disease carrier, male 76 years old, with 1.60 cm, weight 73.5 kg, retired, married, making use of the medication.

Procedures

The study was conducted primarily through the patient's medical history, a questionnaire was used to collect data on age, sex, medication use, and determine whether the patient had medical conditions to participate in the program. After this process, the patient underwent anthropometric assessment, and consists of the measurement of height, weight and body mass index (BMI).

To check the physical fitness and classification of the degree of Parkinson's disease was first applied to the level of physical activity questionnaire - International Physical Activity Questionnaire (IPAQ)²³ And later the individual was classified within the Hoehn and Yahr scale, and pre- requirement to be between stages 1 to 3 of doença²⁴.

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 (Images 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-floor¹⁸ 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 applicability¹⁹. The test was applied according to Magnusson et al²⁰. 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.

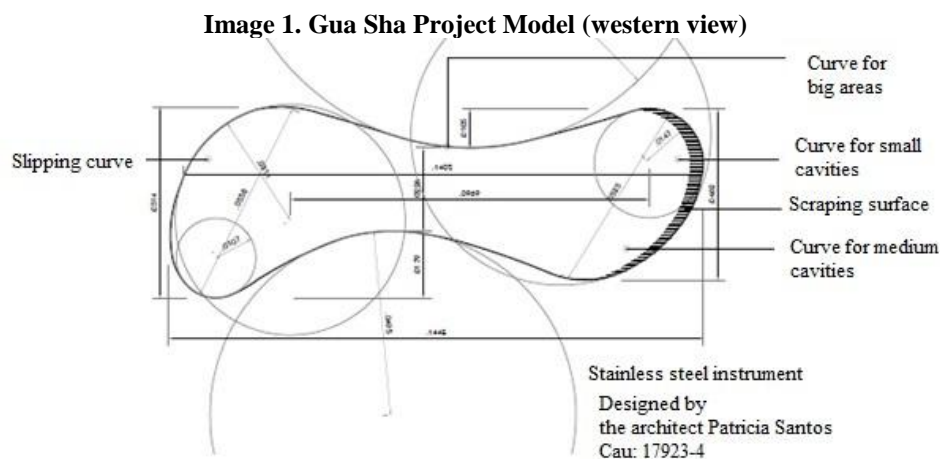


Image 2 Gua Sha model (western vision)



Table 1. Anthropometric data.

Gender	Male
Age	75
Height	1,60cm
Weight	73.6 / 75.8kgs
BMI	28,5/29,61
IPAQ	Active
Hoehn e Yahr	2,5

RESULTS

Table 2. Comparison between the pre and after treatment based on the functional analysis.

Test	Pre	After
Goniometry	55°	90
Fingertip-to-Floor	18cm	0cm

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 patient won a little bit more than 30° of movement, seen that the goniometry of the lumbar back is of 0-95°¹⁸, so the patient got close to the complete movement's amplitude. In the fingertip-to-floor test, the patient was classified as with reduced flexibility, because he stayed more than 10cm away from the floor, and after the use of the technique, he was classified as having regular flexibility.

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 it⁸, 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 energy²³.

The importance of the muscular chains is principally on the level of the pelvic waist, seen that most parts of it cross this area²⁴. 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.

CONCLUSIONS

This way we conclude that the Gua Sha technique (Myofascial induction, western view) is one excellent tool for the myofascial induction, to gain mobility and muscle flexibility of the posterior chain in Parkinson's patients, 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.

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