



Classical massage in multiplesclerosis

Massagem clássica na esclerose múltipla

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ABSTRACT

Background: Multiple sclerosis is an autoimmune disease, inflammatory that affects the white matter of the central nervous system, resulting in neurological signs and symptoms that after the outbreaks, may leave sequels as the location of the lesion. Symptoms may include loss of double vision, muscle weakness, lack of balance, numbness, pain, problem in the control of the bladder and bowel, fatigue, emotional changes and intellectual impairment. **Objective:** To describe the effects and compromise in carrier of multiple sclerosis, to check the efficiency of classical massage in reduction of symptoms and their influence on the performance of activities of daily living. **Method/Design:** It is a study of controlled clinical trial with a convenience sample of individuals already framed in clinical school of physical therapy at the University Nine July (Uninove). Eight were selected individuals diagnosed with Multiple Sclerosis, between 30 and 50 years of age, without dermatological problems for the application of classical massage. The subjects were evaluated before and after the proposed intervention consists of 20 sessions of classical massage performed twice a week having a duration of 40 minutes each session. **Results:** In the first three months, there have been significant results demonstrated the functional assessment (MIF), but from the sixth to the twelve months remained functional stability. The quality of life (SF-36) showed that in pre-requirements of General Condition, Vitality, Social, Emotional and Mental, was increased in the first nine months and after this period, the results were not significant. In the evaluation of the balance by the scale of Berg in the first three months did not show satisfactory results, but from the third month to the sixth month there was a significant increase in the balance. The sensitivity surface showed an increase after the sixth month of application of classical massage, keeping up to twelve months proposed by the study. In profound sensitivity presented significant results from nine months of treatment. **Conclusions:** The present study showed that the physical therapy, through the classical massage, does not eliminate the neurological damage that attends the disease, but can act in the treatment of specific symptoms favoring the well-being and the features of patients with multiple sclerosis.

Keywords: Multiple Sclerosis; Classic massage; Physiotherapy.

RESUMO

Introdução: A Esclerose Múltipla é uma doença autoimune inflamatória, que acomete a substância branca do sistema nervoso central, resultando em sinais e sintomas neurológicos que após os surtos, poderão deixar sequelas conforme a localização da lesão. Os sintomas podem incluir perda da visão dupla, fraqueza muscular, falta de equilíbrio, dormência, dor, problema no controle da bexiga e intestino, fadiga, alterações emocionais e comprometimento intelectual. **Objetivo:** Descrever os efeitos e comprometimentos no portador de esclerose múltipla, verificar a eficiência da massagem clássica na diminuição dos sintomas e sua influência no desempenho das atividades de vida diária. **Métodos:** Trata-se de um estudo de ensaio clínico controlado com uma amostra de conveniência por serem indivíduos já enquadrados na clínica escola de fisioterapia da Universidade Nove de Julho (Uninove). Foram selecionados oito indivíduos com diagnóstico de Esclerose Múltipla, entre 30 e 50 anos de idade, sem problemas dermatológicos para a aplicação da massagem clássica. Os indivíduos foram avaliados antes e após a intervenção proposta composta de 20 sessões de massagem clássica realizada duas vezes por semana tendo uma duração de 40 minutos cada sessão. **Resultados:** Nos três primeiros meses houve resultados significativos demonstrados na avaliação funcional (MIF), porém a partir do sexto até os dozes meses mantiveram a estabilidade funcional. Na qualidade de vida (SF-36) mostrou que nos pré-requisitos de Estado Geral, Vitalidade, Social, Emocional e Mental, obteve aumento nos primeiros nove meses e após este período os resultados não foram significantes. Na avaliação do equilíbrio pela escala de Berg nos três primeiros meses não apresentou resultados satisfatórios, porém a partir do terceiro mês até o sexto mês houve aumento significativo do equilíbrio. A sensibilidade superficial apresentou aumento após o sexto mês de aplicação da massagem clássica, mantendo-se até os doze meses proposto pelo estudo. Na sensibilidade profunda apresentou resultados significativos a partir dos nove meses de tratamento. **Conclusão:** O presente estudo mostrou que a fisioterapia, através da massagem clássica, não elimina os danos neurológicos que cursa a doença, mas pode atuar no tratamento de sintomas específicos favorecendo o bem estar e as funcionalidades dos portadores da esclerose múltipla.

Palavras-chave: Esclerose Múltipla; Massagem Clássica; Fisioterapia.

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INTRODUCTION

Multiple sclerosis (MS) is a degenerative inflammatory demyelinating disease of the central nervous system (CNS),^(1,2) autoimmune chronic and progressive.^(3,4) The demyelination refers to the destruction of myelin, a fatty materials and protein that surrounds certain nerve fibers in the brain and spinal cord, resulting in impaired transmission of nerve impulses.^(5,6,7)

Characterized by multiple lesions limited in size, located exclusively in the white matter of the central nervous system (CNS), with disorderly spread, responsible for clinical polymorphism.^(8,9) It mainly affects young adults, leading to the appearance of various signs and symptoms of impairment in motor areas, sensory, cerebellar and brainstem, sphincter and mental^(10,11,12) in addition to evolve with motor, sensory, visual and coordination deficits, requiring special adjustments in the environment for patients continue with their activities^(13,14)

The health and well-being of these individuals may suffer severe impacts by the disease and/or side effects of medications, with significant interference in the quality of life of their patients.^(15,16) Fatigue is a common and debilitating symptom of MS, and often has a negative impact on quality of life.^(17,18,19)

In Brazil, the studies conducted in São Paulo, show prevalence rate of approximately 5/100,000,⁽²⁰⁾ is considered a low prevalence country. Women are committed more often and the symptoms usually appear between 20 and 40 years, with peak incidence around 30 years. As for the race, is more common in white people.⁽²¹⁾

Massage, according to the descriptors in health science, is the group of systematic and scientific manipulations of body tissues, held hands, aiming to affect the nervous system and muscular and the overall circulation^(22,23) is a manual technique that promotes mobilization of the different muscle and subcutaneous tissue structure, applying a mechanical force on the tissues. This mobilization improves venous and lymphatic return, reduces swelling, mobilizes muscle fibers, tendons and skin. Thus, massotherapy can be used to promote muscle relaxation and to reduce pain, stress and anxiety.^(24,25)

Used to treat various pathological conditions, including multiple sclerosis, cutaneous stimulation is aimed at enabling the mechanical receptors connective tissue⁽²⁶⁾ producing the bonded elastic fibers, it stimulates synovial fluid and promotes pain reduction. Among the techniques are: slippage, which is a surface light and continuous movement performed with the percussion pressure and kneading, manipulation of the muscles, and subcutaneous tissues are alternately compressed and released.^(27,28)

Based on these concepts, this study applied one of the nicest techniques to the patient within the physiotherapy, which is the classical massage, providing welfare to it and can interfere with their clinical condition. Therefore, the aim of the study was to evaluate the sensory aspects, engines and quality

of life in patients with multiple sclerosis after a physiotherapy treatment through the classical massage.

METHODS

This is a clinical trial controlled study with a convenience sample of individuals being fitted in the physical therapy school clinic at the Universidade Nove de Julho (Uninove) approved by the Research Ethics Committee of Uninove under the Protocol 307107/2010 resolution number 196/96. All participants agreed and signed the informed consent. The study included eight patients diagnosed with Multiple Sclerosis outbreak remission form, five females and three males between 30 and 50 years old with no skin problems for the application of classical massage.

Subjects were evaluated before and after the proposed intervention consists of 20 classic massage sessions held twice a week with a duration of 40 minutes each session. The ratings address the quality of life, sensitivity, functionality and body balance.

The evaluation of quality of life was conducted through individual interviews with the Quality of Life questionnaire SF-36. The evaluation of sensitivity was performed by physical examination of surface sensitivity (tactile and painful) and deep (proprioception test). As for the engine aspect was applied to functional independence measure (FIM), which bowed the daily activities such as feeding, transfer, clothing, hygiene, locomotion, communication and understanding, and, as the body balance, the Berg Balance Scale. The classic massage was made up of superficial and deep sliding techniques, and the sliding surface with slight movements, smooth, rhythmic and deep with enough pressure to cause mechanical movement and reflection effects; kneading with mobilization of muscle tissue performed with intermittent pressure; Percussion tissue, frequent hand blows; friction, vibration impulse; vibration circular motion rhythm with uniform velocity and pressure sufficient to mobilize the muscle tissue.

Patients remained in shorts and top for the other regions were naked for the technical application. Massage cream was used as a facilitator of techniques, and after application, the cream was removed by disposable towels fabrics.

The data collected were organized and tabulated Excel spreadsheet editor and later applied in Instant program for statistical analysis, adopting the significance level of $p > 0.05$.

RESULTS

Table 1 shows the demographic data of the subjects of the research.

In functional independence measurement (FIM), it is observed that in the first three months, the patient had no significant result, but from the third to the sixth month, the patients showed a significant increase, and from the sixth month until the twelve months, maintained the functional stability.



The evaluation of quality of life, the SF-36 scale, showed that in the prerequisites General State, Vitality, Social, Emotional and Mental, had an increase in the first nine months and after this period the results were not significant, however, keeping a good quality of life.

In the evaluation of the Berg balance scale, it is observed that in the first three months there was no significant increase, but after the third month until the sixth showed a significant increase, remaining until the end of the intervention.

The scales of values are shown in Table 2.

The measurement of surface sensitivity, both tactile and in pain, the subject experienced a significant increase in sensitivity after six months of classic massage, keeping to the proposed twelve months, reaching normal sensitivity.

As for the deep sensitivity the patient also had a significant increase, but only after nine months of rehabilitation.

Table 3 presents the significant results of sensory acquisition.

Table 1. Demographic data.

Items	Values (standard deviation)
Age	47±10
Gender	5F e 3M
Weight	62±16
Height	161±6
BMI	25±13
Injury time	17±6

Subtitle: F = female; M = male; BMI = Body Mass Index.

Table 2. Scales applied.

Months	FIM	Berg	SF-36
0-3	p > 0.05*	p > 0.05*	
0-6	p < 0.01	p < 0.05	
0-9	p < 0.001	p < 0.01	p < 0.05
0-12	p < 0.01	p < 0.001	p < 0.05
3-6	p > 0.05*	p > 0.05*	
3-9	p < 0.001	p < 0.01	p < 0.05
3-12	p < 0.001	p < 0.001	p < 0.05
6-9	p > 0.05*	p > 0.05*	p < 0.05
6-12	p < 0.001	p > 0.05*	p < 0.05
9-12	p > 0.05*	p > 0.05*	

* No significant values; FIM (Functional Independence Measure); Berg (balance); SF-36 (quality of life). p < 0.05.

Table 3. Sensibility.

Sensibility	p < 0.05*
Superficial	Between 6 and 12 months
Deep	From 9 months

* Statistically significant value.

DISCUSSION

This study evaluated the effects of classical massage on aspects of functioning and quality of life in patients with multiple sclerosis who underwent classic massage sessions and getting results in both aspects. The negative impact of MS and the quality of life, brings bearer effects on several factors, among which the disability caused by the disease would be just one of them. The through classical massage therapy techniques can reinstate the local and general muscle relaxation, reducing pain and anxiety, increasing range of motion (ROM), improving the quality of life and well-being of these patients. The massage mobilizes the tissues and is an important means of modulation and speed of proprioceptive stimuli.

Multiple sclerosis is the leading cause of neurological disability in young adults of middle age, the course of disease results in limitations that may lead to multiple disabilities, both in the professional field as in personnel, thus affecting the quality of life, since their effects usually appear during a very dynamic phase of life. Physical therapy by classical massage helps in the treatment of MS, in both aspects of quality of life as in personal and professional aspects, providing the wearer a better quality of life and well being.

In a study conducted at the Instituto do Coração (Incor) of Sao Paulo, were evaluated 40 pre elective coronary artery bypass surgery patients, divided as follows: 20 in the control group and 20 in classic massage group. The results indicated that the classical massage brought improvement in the level of comfort, decreased fatigue, sleep of the participants of classical massage group compared to the control patients.⁽²⁹⁾

This study showed that physical therapy, through the classic massage, does not eliminate the neurological damage that progresses the disease, but can act in the treatment of specific symptoms favoring the welfare and functionality of patients with MS. It is therefore necessary to search the incentive effects of beneficial massage also in EM, targeting more functionality and well-being in relation to the signs and symptoms manifest.

CONCLUSION

It was concluded that there was a significant improvement as the use of classical massage in MS, with regard to functional independence, quality of life, the superficial and deep sensitivity and balance, unlike observed in some studies which have had little effect on regarding the use of classical massage in other pathologies. It also highlights the scarcity of publications on the topic and indications of treatment, which demonstrates not only the importance of this work but the need for further studies related to the effects of massage in patients with MS.

AUTHORS CONTRIBUTION

LB and MC study design; conducting the research / study: IS, GSSL and MNSS; Data collection: IS, GSSL and MNSS; Data Analysis: LB and AFL; Article Writing: IS, LB and MC.



COMPETING INTERESTS

The authors declare no conflicts of interest.

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