Pain treatment and recovery of functionality in a former athlete diagnosed with myofascial pain syndrome in the course of syringomyelia. Case report

Tratamento da dor e recuperação da funcionalidade em ex-atleta diagnosticada com síndrome dolorosa miofascial no curso de siringomielia. Relato de caso

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ABSTRACT

BACKGROUND AND OBJECTIVES: There are few studies that address non-surgical treatment in cases of syringomyelia, which reduces the possibilities of treatment for the patient. The objective of this study was to analyze the efficacy of the physiotherapeutic treatment for the symptoms of the pathology.
CASE REPORT: Idiopathic syringomyelia is a condition in which a cystic-shaped cavity appears within the spinal cord. After the diagnosis of syringomyelia in C3-C6, 3 years ago, the patient, a former volleyball athlete, remained stable with no anesthetic dissociation, muscle atrophy or limb paresthesia. However, she began to have constant back and neck pain to the extent of limiting her functioning in jogging, volleyball, and difficulties of movement in daily routine. The physiotherapeutic treatment in 6 sessions, worked in the muscle and fascial release with dry needling and manual myofascial release associated with specific vertebral adjustments with chiropractic techniques, and after the cessation of the pain, specific muscle strengthening exercises.
CONCLUSION: Physiotherapy showed to be an effective treatment for patient with syringomyelia that presented symptoms to myofascial pain syndrome.

Keywords: Low back pain, Neck pain, Pain, Physiotherapy, Syringomyelia.

RESUMO

JUSTIFICATIVA E OBJETIVOS: Existem poucos estudos que abordam o tratamento não cirúrgico nos casos de siringomielia, fato que diminui as possibilidades de tratamento para o paciente. O objetivo deste estudo foi analisar a eficácia do tratamento fisioterapêutico para os sintomas da doença.
RELATO DO CASO: A siringomielia idiopática é uma doença na qual uma cavidade em forma de cisto aparece dentro da medula espinhal. Após o diagnóstico de siringomielia em C3-C6, 3 anos atrás, a paciente, ex-atleta de voleibol, se manteve com o quadro estável e sem dissociação anestésica, atrofia muscular ou parestesia de membros, porém começou a ter dores lombares e cervicais constantes a ponto de ter limitação da função em corrida, voleibol e dificuldades de movimentação no dia a dia. Durante o tratamento fisioterapêutico em 6 sessões foi abordada a liberação muscular e fascial a partir do agulhamento à seco e liberação miofascial manual associado a ajustes vertebrais específicos com técnicas quiropráticas, e após cessamento das dores fortalecimento muscular específico.
CONCLUSÃO: A Fisioterapia demonstrou ser um tratamento eficaz em uma paciente com siringomielia que apresentava sintomas relacionados à síndrome dolorosa miofascial.

Descritores: Dor, Dor cervical, Dor lombar, Fisioterapia, Siringomielia.

INTRODUCTION

Syringomyelia is an idiopathic degenerative and progressive chronic disease, characterized by a cavity in the spinal cord. The disease has an average of two to 13 people per 100,000 inhabitants, depending on the country and on the gender (2:1)[1,2].
Syringomyelia diagnosis is usually by MRI, and the image results can show localized or extensive cavities. The localized cavities are the ones that affect the space of up to three vertebrae, and the extensive cavities affect a space bigger than four vertebrae[1,2].
The common symptoms of neurological alterations are a loss of sensation, weakness and limb paralysis, neuropathic pain and general muscle pain, and it can evolve to loss of muscle mass and a picture of physical disability[3].
Physiotherapy plays an important role in the treatment of pain, with techniques and management that can inhibit pain in peripheral and central levels. These techniques promote a competitive inhibition, removal of the mechanical and chemical irritating components, release of endogenous opioids, cortical

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reorganization and homeostasis of the sympathetic and parasympathetic systems[3].

In individuals with neurological involvement, physiotherapy improves the quality of life and functionality. The clinical instruction for the physiotherapists is to perform the therapy with a good theoretical background in order to increase the movement strategies and create an environment where the patient is able to achieve the highest independence level possible[4]. The objective of this study was to analyze the efficacy of physiotherapy to treatment the symptoms of the disease.

CASE REPORT

Female patient, 32 years old, a former volleyball athlete, with a history of low back and neck pain, diagnosed with syringomyelia at the same time. Curiously, the commonly known symptoms (limb paresthesia, sensation dissociation, and muscle atrophy) resulting from the disease were not present. After attempts to treat with drug and complementary therapies, the symptoms persisted, and the patient started physiotherapy. Magnetic resonance imaging tests (Figure 1) between the day of the diagnosis and the beginning of physiotherapy showed that syringomyelia did not evolve and the idiopathic cyst space remained stable.

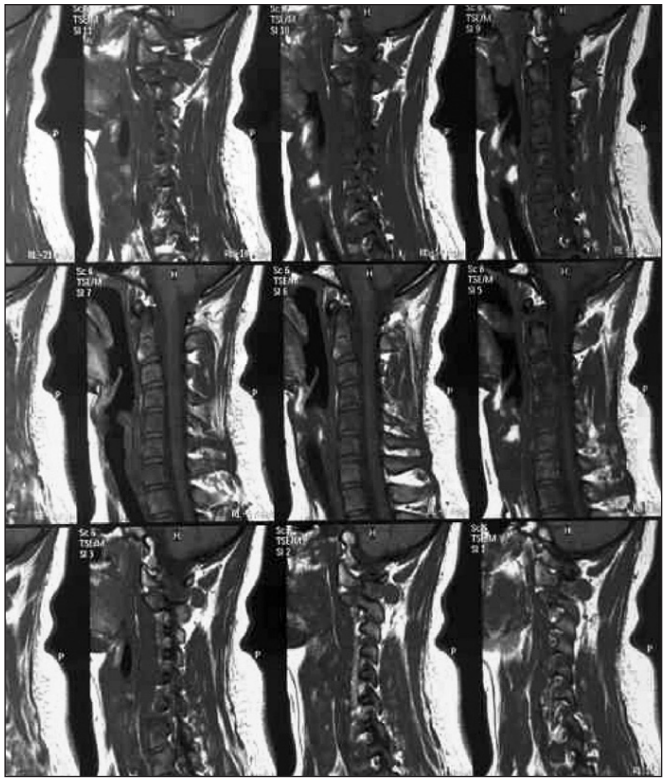

Figure 1. Magnetic Resonance Imaging

The patient referred to pain as eight in 10 in the visual analog scale (VAS), diffuse in the lumbar and neck regions, causing limitation of movement, limitation of functionality in day-to-day and also in sports functions. The Roland-Morris questionnaire to assess physical disability was applied, with the initial score of 16 in 24, suggesting moderate to severe physical disability[5].

The differential physiotherapeutic diagnosis during the assessment included exacerbated muscle tension in the bilateral quadratus lumborum muscle, paravertebral in thoracolumbar and cervicothoracic regions, asymmetry in muscle activation between gluteus and oblique, and vertebral hypomobility specific for L3-L4 flexion, rotation to the right in T12-L1 and C2-C3.

With no bone alterations presented in the examinations, physiotherapy started with dry needling (DN) to inhibit the tension on the quadratus lumborum, bilateral, and paravertebral muscles, and also intratissue DN aiming at the systemically release of endogenous opioids for analgesia.

After the muscle release, a chiropractic manipulation was performed on L3-L4, T12-L1 and C2-C3 vertebrae that presented hypomobility and restriction of the movement, thus completely restoring mobility and movement.

In the third session, the patient who was no longer in pain started a specific preventive muscle strengthening with stabilization of the cervical and lumbar spine, glutes and obliques strengthening exercises for body proprioception.

In the sixth and last session, the patient was once again submitted to the VAS and to the Roland-Morris Questionnaire, and the scores were zero in 10 and zero in 24, respectively, suggesting the absence of pain and physical disability[5]. Then, she was released to return the bodybuilding, jogging and volleyball activities with professional follow-up.

DISCUSSION

Muscle stress associated with trigger points (TP) cause pain, pseudo muscle weakness, and limitation of movement[6]. The stress and pain reported by the patient, possibly caused by syringomyelia, turned to a chronic picture similar the myofascial pain syndrome. The DN technique is relatively new and has been used in the cases of myofascial pain, with efficacy proven in the literature. In the technique, the needle is introduced directly in the point of tension previously assessed, causing an immediate recovery due to the mechanical rupture of the disorganized muscle fibers, releasing endogenous opioids and normalizing the local chemical environment[7].

The body performs biomechanical alterations for its own protection, and they lead to the hypomobility picture characterized as a pathological pattern. As the name says, hypomobility is the lack of movement or blockade to one or more directions and cause several biomechanical compensations that lead to painful situations. There are some techniques that promote the return of vertebral mobility. In this case, it was used chiropractic that involves the low-amplitude high-speed manipulation of the spine, promoting the homeostasis of the movement and full recovery of the joint function[8].

One of the biggest concerns of the physiotherapist is the prevention, to avoid the recurrence of the injury or symptoms. Exercises of stabilization, strengthening and proprioception are widely used with this objective since they improve the alignment of the spine, back pain and reduce the risk of external influences to posture[9].

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CONCLUSION

Physiotherapy proved to be an intervention with good results in a patient with syringomyelia who had symptoms related to the myofascial pain syndrome.

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