CONSERVATIVE CHIROPRACTIC MANAGEMENT OF 58-YEAR-OLD MALE FIREFIGHTER WITH MERALGIA PARAESTHETICA

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ABSTRACT

Objectives: To discuss a case of a male firefighter with meralgia paresthetica who improved following chiropractic manipulation, electrical stimulation, and myofascial therapy

Clinical Features: a 58-year-old white male complained of low back pain with associated pain and numbness along his left anterolateral thigh region for the past week. Neurological examination revealed a diminution of sensation and point discrimination on the left lateral femoral cutaneous nerve territory. There were no motor deficits in either lower extremity and all reflexes were intact. As a standard clinic procedure, a battery of orthopedic exams were performed including; Lasegue Seated test, Valsalva's, Patrick Fabre, Yeoman's Test, as well as Nachlas and Ely's. Based on his clinical history and physical responses to the above-mentioned tests, a diagnosis of meralgia paresthetica was made.

Intervention and Outcomes: Chiropractic management consisted of chiropractic manipulation of the left sacroiliac joint and L3, along with myofascial therapy to the psoas muscle, and interferential therapy to the anterolateral aspect of the left thigh. After 5 visits over a 5-week period resolution of symptoms of Meralgia Paresthetica were achieved.

Conclusion: Chiropractic adjustment along with manual therapy and interferential therapy resulted in improvement of meralgia paresthetica symptoms for this patient. (Chiropr J Australia 2016;44:246-253)

Key Indexing Terms: Meralgia Paresthetica: Chiropractic; Spinal Manipulation; Manual Therapy

INTRODUCTION

Meralgia paresthetica (MP) is an mononeuropathy characterized by paresthesia and numbness in the anterolateral cutaneous area of the thigh due to compression (lesion) and/ or dysfunction of the Lateral Femoral Cutaneous Nerve (LFCN) (1). MP was first described by Bernhardt in 1878 and then in 1885 Hager described hip pain secondary to LFCN trauma (2). In 1895 both Bernhardt and Roth indepentdently published articles on MP. The syndrome was initially known as Bernhardt-Roth Syndrome (2).

The typical symptoms described by patients as well as noted in literature include dull ache, numbness, burning, coldness, lightening pain, tingling, and parastehsia on the lateral or anterolateral thigh as well as localized hair loss (3,4). These symptoms be mild and spontaeously resolve or may have a more severe impact and limit activities of daily living (4). Patients have reported increased symptoms with prolonged standing, walking, extension of the hip as well as when sleeping and alleviation with sitting (4,5). In the United States, the incidence rate of MP is 4.3 per 10,000 person-years. MP has been described in patients from 1 to 80 years old, but most patients with MP are between 41-60 years (3,6).

The exact etiology of MP is uncertain but possible causes include: Obesity, Tight clothing or garments around the belt area, pregnancy, trauma including trauma after surgery, abnormal posture, regional muscle spasms, as well as seat belts (1,2,5,7-10). Conservative management of MP is effective in more than 90% of patients. Recommended conservative non-surgical methods include: correction of mechanical or postural problems, adminstration of non-steroidal anti-inflammatory drugs, application of ice to the area, bed rest until pain has eased and patient is mobile, use of a nerve block, as well as corticosteroid injections given next to the anterior superior iliac spine near where the LFCN emerges(5). Literature regarding rehabilitation for MP is minimal and include manual therapy as well as other interventions including Kinesiotaping and acupucture as possible treatments (2,7,9,11-14)

The purpose of this case report is to the describe the chiropractic management using standard and complentary techniques of manual therapy and physiotherapy of interferential for the treatment of idiopathic MP of a middle-aged male firefighter

CASE REPORT

A 58-year-old white male fire fighter presented to a chiropractic clinic with the complaint of low back pain as well as pain and numbness and burning along his left anterolateral thigh. The patient was 74” tall with a weight of 203 pounds and BMI of 26.1. His BMI falls into slightly overweight, though he did not present with pendulous abdomen or excessive fat in his midsection. He reported that he had low back pain off and on over the years but has never had pain in his leg before. The pain started 3 days prior to him seeking care and had gradually increased in severity, making it difficult for him to stand and work. He described his low back pain as intermittent and stabbing and rated it a 7 on scale of 0 to 10. He described his left lateral thigh pain as burning and rated it a 7 out of 10. Aggravating factors included standing and performing work tasks as a firefighter to include lifting and carrying individuals. The patient was relieved of his symptoms

when he sat down. The patient had received chiropractic care for his low back pain in the past but had never received treatment for his left thigh pain.

Postural evaluation of the patient showed a low iliac crest on the left side. He had decreased lumbar rotation on the right with moderate pain and decreased left lateral flexion of the lumbar spine with pain as well as mild pain in flexion. Most orthopedic tests for the low back were negative, but there were positive findings with localized pain in lumbar spine with Kemp's Test and Yeoman's Test on the left for pain in the left Sacroiliac Joint. There was hypoesthesia in the left lateral femoral cutaneous nerve distribution. All other neurological testing was normal. Muscle palpation detected tenderness and hypertonicity in the left iliopsoas muscle. Additional static and motion palpation evaluation of the Sacroiliac joints and lumbar spine revealed restrictions in the left SI joint as well as joint dysfunction at the level of L3. Our working diagnosis was idiopathic meralgia paresthetica, with sacroiliac joint dysfunction and associated chronic low back pain.

Management and Outcome

On the first treatment visit, the only treatment was spinal manipulation to the Left SI joint and L3. On his second visit to the, 3 days later his symptoms were unchanged. His pain was still rated as a 7 on scale of 0 to 10. Interferential therapy was applied to the anterolateral aspect of the left thigh, where the lateral femoral cutaneous nerve (LFCN) emerges and myofascial release technique was utilized on the left psoas muscle. Home exercises were given to help stretch the iliopsoas muscle. Spinal manipulation was again delivered to the left SI joint and L3.

On his third visit, 3 days later, he said that his symptoms diminished while he was not at work but increased when he was. We discussed work ergonomics and he noted that his work belt with the radio was located in the same area as the nerve exit site. He was told to loosen the belt. Treatment similar to last visit was provided and he responded well. The patient returned 2 days later for his fourth treatment noting a great improvement of his symptoms. His pain decreased by 50% to a 3 on the pain intensity scale and there was a decrease in the burning and numbness in his left upper thigh. He then returned a week later with no burning or numbness in his thigh. Spinal manipulation and myofascial release were still performed. He was instructed to continue stretching and ensuring to note belt tightness and radio positioning while at work.

The patient opted to be seen as need and returned to the office a year and half later with similar symptoms that resolved within 2 treatments of spinal manipulation, myofascial release, and interferential current.

DISCUSSION

The results of this case report suggest that a mechanical entrapment of the lateral femoral cutaneous nerve can be manually released using myofascial release along with spinal manipulation to ensure proper biomechanics of the pelvis, resolving the patient's paresthesia and burning pain in his upper thigh.

Meralgia paresthetica is a peripheral nerve disorder commonly associated with an entrapment neuropathy (2). MP is typically due to compression of the Lateral Femoral Cutaneous Nerve (LFCN), which in turn causes paresthesia with tingling and burning sensation in the thigh region (9). MP has many etiologies and different causes that have been cited within the literature. It can be categorized as spontaneous or iatrogenic (2).

Sponatenous meraglia paresthetica can occur at any age, it is most frequently noted between 41-60 years of age (3). A gender predominance has not yet been determined though work performed by Ecker and Woltmann (15) indicates a higher incidence in men. Another series evaluated a family with MP in four generations, this suggested an autosomal dominant trait (2). Spontaneous MP occurs in the absence of prior surgical procedure and is divided into idiopathic, mechanical or metabolic(1). Spontaneous causes include mechanical factors such as pregnancy, obesity, and other conditions that increase intraabdominal pressure(2). Wearing of tight trousers (8), belts, and corsets can result in direct pressure to the LFCN, and there is evidence to suggest that wearing a tight belt with an accompanying holster for a pistol has been described to cause MP(4). Metabolic factors of MP include: lead poisoning, alcoholism, diabetes mellitus (2,4)and hypothydroism (1). Other causes of sponatenous onset of MP are leg-length disparity and radiological degernativedefects of the symphysis pubis (1).

Iatrogenic meralgia paresthetica has been reported as a post surgical complication (4) after hip joint replacements, spinal surgery, and pelvic osteotomy (2,4). In one study they examined the occurrences of injury to the lateral femoral cutaneous nerve in 192 patients who underwent anterior approach total hip arthroplast and hip resurfacing. They found that 170 (81%) reported LFCN neuropraxia(4). In a prospective analyisis of 105 spine surgeries and subsequent 1 year follow up, 20% of patients suffered an injury to LFCN (2). MP has been reported at a lesser extent as a post-surgical complication in iliac bone harvesting, laparoscopic cholecystectomy, open and laparoscopic appendectomy, cesarean with epidural analgesic, coronary artery bypass grafting, laparoscopic inguinal hernia repair and obstetric and gynecological surgery (2,4).

The diagnosis of MP is usually diagnosed through a comprehensive history and anatomically relevant physical examination, though differential diagnosis should include metastasis in iliac crest and lumbar disc herniations. Alvusion fractures of the ASIS have been reported to present as clinical MP like syndrome as well as chronic appendicitis (1,2,16). It is important that clinicians have clinically relevant differential diagnosis when evaluating their patient.

Treatment of Meraglia paresthetica varies from sponatenous recovery and conservtive measures to surgery (17). Many authors mentioned that meraglia paresthetica resolves sponateously, only a few studies mention patients improving without some need of conservative treatment (17). Before the mode of treatment is decided it is important for the clinician to rule out any neuropathy associated systemc diseases or tumors (16). The first choice of conservative treatment should be to tackle the underlying cause (if known), such as weight loss or wearing tight clothing and/or belts (1,16). Conservative management has included the use of kinesiotaping (12) which showed improvement in a 4 week peroid of only kinesiotaping. Manual therapy has been noted in a few chiropractic case studies (10,13) to resolve the symptoms of meralgia paresthetica. Theconservative treatments reported among the case studies included: Active Release Techniques (ART), mobilization/ manipulation for the pelvis(10), myofascial therapy for rectus femoris and iliopsoas(14), transcutaneous electrical nerve stimulation (TENS)(16),stretching exercises for the hip and pelvic musculature, and pelvic stabilization/abdominal core exercises(13). Other conservative managments discussed were the use of non-steroidal anti inflammatory drugs (16), analgesics,and application of ice (5,17). Nonoperative treatment as been reported to yield excellent results. William and Trzil reported the use of NSAIDs, ice and the removal of constricting item around the waist was successful in 91% of 277 patients (18,19).

The use of nerve blocks was found effective in the treatment of MP(5). In a series of 44 patients that were followed up to one year reported that 32(73%) improved completely, with only a single injections of hydrocortisone acetate, 9 (20%) had partial resolution, and only 3(7%) had reoccuring symptoms (17). Surgical intervention for meraglia paresthetica has generally been reserved for patients that do not respond to conservative measures of treatment(2). Surgical management has included decompression, neurectomy (17), neurolysis of the constricting tissue , neurolysis and trasposition of the lateral femoral cutaneous nerve, and transection with excision of a portion of the LFCN (2). The surgical intervention was found successful between 44%(2)-and 66%(17) of the time. Neuroectomy had improvement in 85% of the patients (17).

CONCLUSION

A middle-aged firefighter with idiopathic MP caused by external pressure from uniform and associated left SI joint dysfunction and L3 dysfunction benefitted from conservative chiropractic management that included chiropractic manipulation, myofascial release and electrical stimulation.

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