

TREATMENT OF SCIATICA WITH ELECTRO-ACUPUNCTURE AND TUINA: A CLINICAL CASE STUDY

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ABSTRACT

Background Sciatica and back pain can be difficult to treat, especially when it does not have clear diagnosis from a western biomedical perspective such as negative findings in a MRI.

Objective To examine the approach and efficiency of electro-acupuncture and Tuina in the treatment of sciatica and back pain with unclear biomedical diagnosis.

Result After 2 treatments the patient experienced significant decrease of sciatic pain and numbness

Conclusion Electro-acupuncture and Tuina appear to be effective in treating sciatica and back pain with unclear biomedical diagnosis

Background

Biomedicine Perspective

Sciatica is pain that radiates along the course of sciatic nerve, most often down the buttocks and the posterior aspect of the leg to below the knee. It may occur with or without back pain. It is most commonly caused by peripheral nerve root compression from intervertebral disc protrusion or intraspinal tumor. Compression may be within the spinal canal or intervertebral foramen by disc protrusion, tumor, or bony irregularities (herniated disc, degenerated disc, lumbar spinal stenosis - osteoarthritis, spondylolisthesis) The nerves can be also compressed outside the vertebral column, in the pelvis and buttocks (sacroiliac joint dysfunction and piriformis syndrome) . Toxic or metabolic causes (eg. alcoholism, diabetic neuropathy) are rare. Such processes are confirmed by the presence of sensory or motor deficits and by clinical or electrodiagnostic findings.(1). The common treatment in biomedicine includes using heat/ice, medications, epidural injections, surgeries, education and exercises. Medications include NSAIDs, opioid and muscle relaxants such as diazepam, cyclobenzaprine, carisoprodol and methocarbamol. Rest and back exercise are now known to be ineffective. Epidural injections can provide short-term relief of sciatica but do not improve functional status or reduce the need for surgery. Surgical procedures may be necessary to relieve intractable pain or other neurologic involvement such as herniated disc or spinal stenosis. Classic discectomy with limited laminotomy for intervertebral disc herniation is standard. Laminectomy can be used for spinal stenosis. Spinal fusion can be performed for spondylolisthesis. (2). However it is difficult to treat sciatica with no clear biomedical diagnosis, which is common in clinic.

Traditional Chinese medicine perspective

Sciatica in TCM can be considered as back pain. The causes of the back pain can be differentiated as invasion by wind- cold, deficiency of kidney qi, and qi and blood stagnation due to trauma. The treatment for sciatica usually includes acupuncture, herbs and Tuina. The acupoints includes BL23 andGV3 to tonify kidney, BL40 to open the meridians. For damp- cold type, add BL25, BL26; for kidney qi deficiency, add GV4.

Moxibustion can be applied to the acupoints for either of these previous two conditions. For kidney yin deficiency, add BL52, Kid3; for trauma, add GV26 and yao tong point.

(3)

The following formulas can be prescribed to treat lumbar pain: modified ganjiang lingzhu tang for damp-cold type. This formula tonifies the spleen, drains the damp, dispels the cold, and relieves pain. Modified simiao wan can be used for damp-heat type condition. This formula drains the damp and clears heat. Other herbs such as mu gua, luo shi teng can be added to increase the efficacy of pain relief. Shen tong zhu yu tang can be used for blood stasis. This formula moves qi and blood and opens the meridians to stop pain. You gui wan treats kidney yang deficiency and zuo gui wan treats kidney yin deficiency. (4) For Tuina treatment, the following Tuina techniques can be used: pointing, pressingkneading, rolling, stretching, etc. (5), (6), (7).

Research

Several papers describe the treatment of sciatica with acupuncture.

Feng reported successful treatment of 58 cases of nerve trunk type sciatica with catgut (a special thread made of pig intestines) implanted at acupoints. GB30 and BL54 were chosen as main points, while BL36, BL 37 and GB34 were chosen as alternate points. Catgut was implanted in one main point and one alternate point once every 15 days. Among 58 cases, 35 were cured, 12 showed marked improvement, 7 achieved effectiveness and 4 did not improve. (8)

Zeng employed a therapy of acupuncture by warming the needle with an ignited moxastick for 74 cases of sciatica and obtained satisfactory result. Warm needling was performed at GB30, GB34, and BL57 for wind-cold type. GV4, BL23, BL37, BL54 and BL40 were used for kidney deficiency. BL24, BL26, BL32, BL57 were used for blood stasis. Among 74 cases, 31 were cured, 22 showed marked improvement, 21 achieved effectiveness. (9)

Wang reported treating 455 cases of sciatica with deep needling BL26 and obtained satisfactory result. Two 4 cun long needles were inserted into BL26 to achieve a sensation of electric shock. The needle is retained for 30 minutes during which time it is thrust and lifted 2-3 times. Among the 455 cases, 320 were cured, 83 were markedly effective, 35 were improved and 17 failed. (10).

Case History

Patient Identification and Chief complaint

The patient is 45 year-old female with sciatica

History of Chief Complaint

The patient started to have right side sciatica 3 years ago. She also sprained her right ankle twice 6 months before her sciatica started. A MRI scan on her low back was normal. The patient never received a diagnosis. She was treated with physical therapy, which helped her. Yoga stretch also helped. Then she got busy and gained some weight, which made the sciatica worse.

When the patient came for acupuncture treatment, she described the pain was constant dull pain most times, but can be sharp some times. It was in her low back, gluteal area, radiating along the back of her leg to the bottom of her foot. She also experienced deep pain in her right greater trochanter area and numbness in her right last 2 toes. On a scale from 1 to 10, she rated her pain level was 7 or 8. Pain was worsened by sitting and lessened by lying down with heat or ice on her hip. The patient reported that she felt stress about her pain.

The patient past's medical history included sinus surgery for her sinus. Her sinus is fine

now and even her dizziness went away after the surgery. She also had bleeding between her menses, which her doctor thought was due to perimenopause.

She felt cold. She described that she had nervous stomach with alternating loose stool or constipation. She felt tired and moody sometimes. Her menses is heavy with bleeding between. She did not feel particularly thirsty and her urination is normal. She can sleep 7 hours per night, which she felt was normal for her.

Exam

Palpation examination reveals tenderness in her right low back jiaji L5 and S1 area, right SI joint, right piriformas muscle and in her groin area.

Straight leg lifting test was negative, yeoman's test was positive on her right SI joint, piriformas tension test was positive on her right side, figure "4" test was positive for her right hip. Manual muscle testing showed weak right adductor muscle. Her right leg was slight longer.

Her right pulse was wiry and slippery. Her left pulse was slight weak. Her tongue was pale and scalloped with thin yellow coating.

Diagnosis

Western biomedicine: right SI joint anterior subluxation, piriformas syndrome, right hip joint subluxation. (positive orthopedic tests)

Traditional Chinese medicine: Qi and blood stagnation in her Bladder meridian, Qi and blood deficiency being not able to nourish muscles and tendons.

Her stress and wiry pulse suggest Qi stagnation, which can lead to blood stasis causing sciatica. Coldness, fatigue, alternating diarrhea and constipation, slight weak pulse on her left side and pale tongue suggest deficiency of Qi and blood.

Treatment

The treatment principle is to relax muscles, help the recovery of joint subluxation, move Qi and blood, and tonify Qi and blood.

The patient was treated twice before the case was reported.

Electro acupuncture was applied on trigger points on her right piriformis muscle and from Jia ji L5 to Ashi point in her right SI joint to relax her muscle. The frequency is selected by mixed frequency-100/2 and the length of duration is 30 minutes. Other points being used are: Motor points for her adductor was needled after the electro- acupuncture was finished to strengthen her adductor, LI 4 and LIV 3 to move Qi and blood, ST 36 and SP6 to tonify Qi and blood.

Tuina was applied after acupuncture. Rolling, pressing/kneading and pushing were performed to relax muscles and open the meridians. Stretching the SI joint and hip joint follows. The Tuina treatment duration per session is 15 minutes.

Case Management

The patient did not come back for more treatment after the first two treatments. I recommended the patient continue to receive another eight treatments as one course of treatment. I also suggested the patient continue yoga stretching and exercising to lose weight. Pelvic support is recommended to help stabilize the patient's SI joint if the patient still has pain after one treatment course. Herbs will also be prescribed if the patient still has symptoms in the future such as Shen Tong Zhu Yu Tang.

Result

After the first treatment, the patient noticed a decreased pain in her right hip and leg. After the second treatment, the sciatica and the deep pain in her greater trochanter area went away, and the numbness in her right last two toes disappeared, too. Her leg length was equal. All the orthopedic tests became negative.

Discussion

Like many others, this patient did not have a specific biomedical diagnosis when she came for acupuncture. In my clinical experience, I found that when the sciatica was due to compression by the soft tissues around the sciatica nerve, and there are no abnormal changes in imaging tests. It is difficult for biomedicine to make a diagnosis. This patient's sciatica is due to compression on the sciatic nerve by piriformis muscle and SI ligaments from SI joint subluxation. Biomedicine does not agree that there is such condition of SI joint subluxation, because it usually will not show in X-ray or MRI. However, positive orthopedic test and clinical result suggest that there is such a condition. Another condition that the patient had was hip joint subluxation due to imbalance of agonist and antagonist muscles- tight piriformis muscle and weak adductor muscles. It is one of the advantages of acupuncture and Tuina that they can be used to treat patients with sciatica who do not have a clear biomedical diagnosis and still provide relief for them. However it is difficult to determine if the piriformis syndrome or the SI joint subluxation is causing the patient's sciatica or if it is both conditions. A combination of electro-acupuncture and Tuina is the key to treat sciatica due to musculo-skeletal conditions (piriformis syndrome and SI joint subluxation in this case). Because acupuncture works well to open meridians and relax piriformis muscle, Tuina works well on SI joint subluxation as well as on piriformis muscle. Besides orthopedic tests, it will be of interest to researchers to establish other diagnostic methods to prove that there is SI joint subluxation causing sciatica due to compression on the sciatic nerve.

Conclusion

Sciatica due to unclear biomedicine diagnosis can be difficult to treat. This case demonstrated the effectiveness of electro-acupuncture and Tuina in treating sciatica due to compression on the sciatic nerve by piriformis muscle and SI ligaments from SI joint subluxation. The result is encouraging, further high quality clinical trials with larger number of subjects and adequate follow-up periods are needed.

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