Case Report

Integrated Yoga and Naturopathy Approach in the Management of Sciatica - A Case Report

Jeyashree K[1], Pandiaraja M[2]

From, [1]PG Scholar, Department of Naturopathy, [2]HOD, Department of Naturopathy, International Institute of Yoga and Naturopathy Medical Sciences, Chengalpattu-603001, India.

ABSTRACT

Sciatica is the painful debilitating condition characterized by excruciating pain, numbness, tingling or burning sensation over the dermatomal course of sciatic nerve distribution. Globally its prevalence is about 1.2 to 43%. It is usually caused by nerve root compression or irritation, disc herniation, vascular anomalies, muscular or bony compression. We report the case of 50 year old male with the complaint of low back pain associated with pain radiating to left leg. On the basis of clinical examination the case was diagnosed as sciatica. Yoga and Naturopathy interventions were given for 7 days in outpatient ward. After the intervention the pain gradually decreased. VAS reduced from 10 to 4. SFI score reduced from 19 to 10. SBI score reduced from 23 to 13.The VAS Scale and SBI and SFI showed improvement in scores. No adverse effects were observed during the treatment. Yoga and naturopathy have been shown to decrease the pain, bothersomeness and frequency of symptoms. Hence this study can be done with large sample size in future with longer duration of course of treatment.

***Key words*:** Sciatica, Lumbar traction, Massage, Yoga and naturopathy.

Sciatica is the painful debilitating condition characterized by excruciating pain, numbness, tingling or burning sensation over the dermatomal course of sciatic nerve distribution(1)(2). Globally its prevalence is about 1.2 to 43%(3). Sciatica is more common among men and its prevalence is 5.3% in men and 3.7% in women(4). It is usually caused by nerve root compression or irritation, disc herniation, vascular anomalies, muscular or bony compression (5)(6). The leading cause of sciatica is lumbar disc herniation in 85% of patients(3). Risk factors for sciatica includes age, gender, obesity, smoking, occupational factors and health status(7). Diagnosis mainly involves proper history taking and physical examination like Straight leg raising test and Crossed straight leg raising test which indicates nerve root tension. Imaging like MRI is indicated in chronic cases in which patient do not respond to conservative treatment for 6 to 8 weeks(8). Treatment usually involves administration of pain relieving drugs, non-steroidal anti-inflammatory drugs, opioids and surgical procedure(9). But the preferred treatment for sciatica includes manual therapy, exercise as there are no big differences in clinical outcome between conservative care and surgery(10).

Massage is an alternate non-invasive complementary therapy which helps to relieve pain and improve mental relaxation(11)(12)(13). Manual lumbar traction uses gentle pressure for spinal elongation which helps in relieving mechanical stress and nerve root compression(14). Acupuncture is the traditional Chinese system of medicine which involves insertion of needle in a point along the course of meridians is known to produce analgesic effect(10). Yoga which establishes harmonious relationship between body, mind helps in reducing pain, disability and helps in improving physical and mental health(15).

Access this article online

Received – 1st July 2024

Initial Review – 3rd July 2024

Accepted – 5th September 2024

Quick response code

CASE REPORT

A 50 year old male patient reported to the OP Department with the low back pain of acute onset for the past 10 days and difficulty in walking with pain radiating to left leg associated with numbness and tingling sensation over his left leg. Patient had difficulty in doing daily activities and inability to lie in the affected side. On inspection patient gait was found to be antalgic gait. On examination Straight leg raising test tested positive at 45 degree indicating the presence of disc herniation and Crossed leg raising test which has high specificity in diagnosing sciatica tested as positive indicating nerve root tension. Sleep was disturbed as pain gets aggravated while lying on affected side. Bowel movement was regular and

Correspondence to: Dr. K. Jeyashree, Department of Naturopathy, International Institute of Yoga and Naturopathy Medical Sciences, Chengalpattu-603001.

Email: jeyashreedoctor97@gmail.com

micturition is of normal frequency. Appetite and digestion was good. Patient was well oriented with good complexion. The treatment protocol followed for 7 days is mainly relied on reducing nerve root compression which is the main cause of pain and other neurological symptoms.

Manual lumbar traction was given by the therapist using gentle pressure to alter the force and the direction of the pull to minimize the nerve root compression. Massage therapy which includes manipulation of soft tissues using techniques like passive touch, digital stroking, palmar stroking, friction, effleurage, tapotement, superficial vibration were given to low back for 7 days helps in relieving pain and aids in promoting mental relaxation. Acupuncture (insertion of needle in a specific acupuncture point) was given for 7 days with the local points UB-23, UB-25, UB-36, UB-40, UB-56, UB-57 which runs along the course of sciatic nerve are known to relieve pain. Yoga asanas like tadasana and savasana were given for 7 days with 2 minutes duration for each asana to minimize nerve root compression which in turn relieves pain. Tadasana is performed by standing straight with feet together and hands by the sides of the body. Final postion of tadasana is achieved by alternate dorsiflexion and plantarflexion of ankle and foot with hands raised above head enabling the complete stretch of spine. Savasana is performed by lying flat on back with arms about 15 cms away from the body, palms facing upwards enabling the relaxation of whole psycho-physiological system.

During the course of treatment the patient's condition gradually started to improve. After 7 days of intervention there are marked changes in pain intensity and in SBI, SFI scores. VAS reduced from 10 to 4. SFI score reduced from 19 to 10. SBI score reduced from 23 to 13.

DISCUSSION

Manual lumbar traction increases intervertebral spaces by spinal elongation thereby decreasing spinal nerve root compression. It also decreases mechanical stress and nociceptive impulses thus decreases pain(14). Traction enhances the opening of foramina and directs the herniated disc inward(16).

Massage improves pain threshold (decreases pain) by increasing the release of endorphins. It stimulates large diameter nerve fibres which inhibits inputs onto T cells and excites small diameter fibres thereby relieving pain(13). Massage also causes relaxation mentally and physically by improving parasympathetic activity and reducing the cortisol level(17).

Yoga causes contraction of posterior spinal muscles which elongates and enables the spine to straighten up. This stretch relieves nerve root compression which is the main cause of sciatic pain(18). Asanas also addresses the blockage of energy in any joint and releases it, allowing it to flow freely to enhance strength and sense of relaxation(19).

Acupuncture modulates brain systems to secrete various signal molecules like opioid peptides, cholecystokinin octapeptide, glutamate which are known to produce analgesic effects(9). Points were chosen from bladder meridian as sciatica is related to bladder meridian according to traditional Chinese medicine(3). These local point stimulation would inhibit small diameter high threshold inhibitory nerve fibres which in turn inhibits pain stimulus transmission to the brain(7).

CONCLUSION

The given treatments in this study are effective in decreasing pain and associated symptoms in case of sciatica. Yoga and Naturopathy treatments are thus well known for decreasing the pain and associated symptoms by relieving nerve root compression without any adverse effects. The study can further be proceeded with longer duration and more sample size in future.

REFERENCE

1. Peter C. Emary, BSc, DC1 2. Evidence-based prognostication in a case of sciatica. J Can Chiropr Assoc. 2015; 59(1):24–9.
2. David Davis 1, Kushagra Maini 2, Muhammad Taqi 3 AV 4. Sciatica. StatPearls; 2024.
3. Fang-Ting Yu,1,2 Guang-Xia Ni,3 Guo-Wei Cai,4 Wen-Jun Wan,5 Xiao-Qing Zhou,6 Xiu-Li Meng,7 Jin-Ling Li,1,2 Jian-Feng Tu,1,2 Li-Qiong Wang,1,2 Jing-Wen Yang,1,2 Hai-Yang Fu,8 Xin-Chang Zhang,3 Jing Li,4 Yan-Fu Wang,5 Beng Zhang,6 Xiao-Hui Zhang,9 Hao-Lin Z 10. Efficacy of acupuncture for sciatica: study protocol for a randomized controlled pilot trial. Trials. 2021; 22:34.
4. Dr. Amit Kumar1* DKR and DSKS. Ayurvedic management of gridhrasi w.s.r to sciatica – a case study. World J Pharm Res. 2017; 6(6):1092–8.
5. Naragatti S, Naturopathy CCFRIYA, T S a, CCRYN, Hosakote VS, CCRYN. Role-of-Yogic-Practice-in-Sciatica-Pain July 2023 1623812864 1927605. NTERNATIONAL J Sci Res. 2023; 12(7):1–4.
6. Ching-Hsiung Liu,1,2 Yen-Ying Kung,2,3,4 Chun-Liang Lin,1 Jen-Lin Yang,2,3,4 Ta-Peng Wu,3 Hong-Chun Lin,3 Yang-Kai Chang,3 Ching-Mao Chang,2,3,4 and Fang-Pey Chen2 3. Therapeutic Efficacy and the Impact of the "Dose" Effect of Acupuncture to Treat Sciatica: A Randomized Controlled Pilot Study. J Pain Res. 2019; 12:3511–3520.
7. Mei Ji, 1 Xiaoxia Wang, 1 Meijuan Chen, 1 , 2 Yan Shen, 1 Xu Zhang, 2 , * and Jin Yang 1 *. The Efficacy of Acupuncture for the Treatment of Sciatica: A Systematic Review and Meta-Analysis. Evid Based Complement Altern Med. 2015;
8. B W Koes, M W van Tulder WCP. Diagnosis and treatment of sciatica. BMJ. 2007; 334(7607):1313–1317.
9. Fang-Ting Yu,1 Cun-Zhi Liu,1,2 Guang-Xia Ni,3 Guo-Wei Cai,4 Zhi-Shun Liu,5 Xiao-Qing Zhou,6 Chao-Yang Ma,7 Xiu-Li Meng,8 Jian-Feng Tu,1 He-Wen Li,1 Jing-Wen Yang,1 Shi-Yan

Yan,1 Hai-Yang Fu,9 Wen-Tao Xu,3 Jing Li,4 Hong-Chun Xiang,4 Tian-Heng Sun,5 Beng Z corresponding author1 and LQW author1. Acupuncture for chronic sciatica: protocol for a multicenter randomised controlled trial. BMJ Open. 2022; 12(5).
10. Zhihui Zhang, 1 , 2 Tingting Hu, 3 , 4 Peiyan Huang, 1 , 2 Mengning Yang, 1 , 2 Zheng Huang, 1 , 2 Yawen Xia, 1 , 2 Xinchang Zhang,corresponding author 1 , 2 , * Xiaolin Zhang,corresponding author 5 , * and Guangxia Nicorresponding author 1 , 2 *. The efficacy and safety of acupuncture therapy for sciatica: A systematic review and meta-analysis of randomized controlled trails. Front Neurosci. 2023; 17.
11. Huixin Yan, MM, Yun An, MD, Tao Zhang, MD, Jiangna Zhao, MM, and Juntao Yan P∗. Therapeutic effect and safety of Tuina on sciatica. Med (Baltimore). 2021; 100(48).
12. Laura Allen, BA L. Case Study: The Use of Massage Therapy to Relieve Chronic Low-Back Pain. Int J Ther Massage Bodywork. 2016; 9(3):27–30.
13. Andrea D Furlan, corresponding author Mario Giraldo, Amanda Baskwill, Emma Irvin, Marta Imamura and C. Massage for low-back pain. Cochrane Database Syst Rev. 2015; 2015(9).
14. Inge Wegner, corresponding author Indah S Widyahening, Maurits W van Tulder, Stefan EI Blomberg, Henrica CW de Vet, Gert Brønfort, Lex M Bouter, Geert J van der Heijden and C. Traction for low-back pain with or without sciatica. Cochrane Database Syst Rev. 2013; 2013(8).
15. Douglas G. Chang,1,* Jacquelyn A. Holt,1 Marisa Sklar 3 and Erik J. Groessl2. Yoga as a treatment for chronic low back pain: A systematic review of the literature. J Orthop Rheumatol. 2016; 3(1):1–8.
16. Ahmed M. El Melhat,1,2 Ahmed S. A. Youssef,3 Moustafa R. Zebdawi,2 Maya A. Hafez,2 Lamia H. Khalil,2 and Deed E. Harrison4 *. Non-Surgical Approaches to the Management of Lumbar Disc Herniation Associated with Radiculopathy: A Narrative Review. J Clin Med. 2024; 13(4):974.
17. Pornratshanee Weerapong 1, Patria A Hume GSK. The mechanisms of massage and effects on performance, muscle recovery and injury prevention. Sport Med . 2005; 35(3):235–56.
18. Mrithunjay Rathore, Soumitra Trivedi, Jessy Abraham 1 and Manisha B Sinha. Anatomical Correlation of Core Muscle Activation in Different Yogic Postures. Int J Yoga. 2017; 10(2):59–66.
19. Catherine Woodyard. Exploring the therapeutic effects of yoga and its ability to increase quality of life. Int J Yoga. 2011; 4(2):49–54.

How to cite this article: Jeyashree K, Pandiaraja M. Integrated Yoga and Naturopathy Approach in the Management of Sciatica - A Case Report. Indian J Integr Med. 2024; 4(4):142-144.

Funding: None; Conflicts of Interest: None Stated