



Integrated Management of Acute Sciatica

Dr. Dasari Srilakshmi

Ayurvedic Physician and Physiotherapist, SGS Hospital, Sri Ganapathy Sachchidananda Ashram, Mysuru-570025

Received: 15-04-2018 / Revised Accepted: 27-05-2018 / Published: 01-06-2018

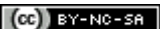
ABSTRACT

Indian traditional system of medicine Ayurveda, defines health as the soundness of body (sharira), mind (manas) and self (atman). Physiotherapy helps improve patient's quality of life with massage, exercise and electrotherapy. Music is rhythmic sounds produced by various instruments. Sciatica (Grudhrasi) is a painful condition caused by the compression of lumbar or sacral nerves (L₃-L₅ and/or S₁-S₃) or by compression of sciatic nerve itself. Ayurvedic treatments designed for this case include abhyanga (oil massage) with Mahanarayana taila and Dashamula kwatha seka along with Interferential therapy (IFT), an electrotherapy modality in physiotherapy. Throughout the entire treatment session music for healing and meditation CD was played for 10 consecutive days. Abhyanga and seka are to alleviate pain (vatahara treatment) and IFT facilitates analgesic effect and promote healing process. Ragas/tunes like Madhyamavati, Shankarabharanam, Hindola and Kalyani etc. are significant for their soothing effects and tranquilize the mind. The pathway for pain is through spinothalamic tract; inhibition of pain may be by blocking its transmission, interrupting with heat (abhyanga and seka) and external sensory stimulus (IFT). The auditory stimulus through auditory nerve reaches auditory cortex and enhance to calm down the cortex activity resulting in manah prasannata (calming down/pleasantness of mind). Integrated system of approach; Ayurveda, Physiotherapy and Music therapy; is an innovative experiment with above mentioned treatments that are given externally without any internal medicament is discussed in this paper.

Key Words: Dashamula kwatha seka, mahanarayana taila abhyanga, interferential therapy, music therapy, sciatica, grudhrasi and integrated approach

Address for Correspondence: Dr. Dasari Srilakshmi, B.P.T, B.A.M.S, M.D (Ayu), Ayurvedic Physician and Physiotherapist, SGS Hospital, Sri Ganapathy Sachchidananda Ashram, Mysuru-570025, India. Email id: drdasari24@gmail.com

How to Cite this Article: Dr. Dasari Srilakshmi. Integrated Management of Acute Sciatica. World J Pharm Sci 2018; 6(6): 112-115.

This is an open access article distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License, which allows adapt, share and build upon the work non-commercially, as long as the author is credited and the new creations are licensed under the identical terms. 

INTRODUCTION

Pain is defined as an unpleasant sensory and emotional experience associated with actual or potential tissue damage or described in terms of such damage.^[1] Sciatica is a set of symptoms including pain caused by compression or irritation of one of five spinal nerve roots (L₃-S₂) that give rise pain in the lower back, radiating to various parts of the leg and foot. Pain may be associated with numbness, muscular weakness, pins and needles or tingling sensation and difficulty in moving or controlling the leg. Typically the symptoms are felt on one side of the body, pain can be severe in prolonged exposure to cold weather.^[2] Symptoms exhibited in sciatica are similar to condition described a condition known as 'Grudhrasi' in Ayurveda, where in this condition is caused by aggravated vata dosha. Hip is first afflicted by stiffness, pain and pricking sensation in the waist, back, thigh, knee and calf region. All these areas get twitching sensation frequently. Grudhrasi is of two types depending on doshas aggravated: one caused due to aggravation of vata alone and other caused by aggravation of both vata and kapha dosha which also have drowsiness, heaviness and anorexia in associated with those of symptoms mentioned above cause only by vata.^[3] Mahanarayana taila^[4] abhyanga and Dashamula^[5] kwatha seka are Ayurvedic preparations and procedures indicated for vata vyadhi. IFT was used for analgesic effect and stimulation of local circulation. Music therapy is one of the alternative therapeutic treatments; it is the planned and creative use of music to attain and maintain health. Music had been used as a healing force for centuries.^[6] Music therapy goes back to biblical times, when David played the harp to rid King Saul of a bad spirit. As early as 400 B.C., Hippocrates, Greek father of medicine, played music for his psychologically ill patients; Aristotle described music as a force that purified the emotions. In the thirteenth century, Arab hospitals contained music rooms for the benefit of the patients.^[7] Music therapy began in the aftermath of World wars I and II. Musicians would travel to hospitals, particularly in the United Kingdom, and played music for soldiers suffering from war-related emotional and physical trauma.^[8] After an extensive research, with 72 melakarthis, 365 different ragas were recorded exclusively for healing purpose, among them few ragas like Madhyamavati, Shankarabharanam, Kalyani, Hindola, Hamsanandi, Vasantha etc. were selected to be played throughout the duration of each treatment.^[9]

CASE REPORT

Patient aged 69 years willing for integrated approach and strongly against any internal medication had been selected for this study. Patient had severe low back pain radiating to left lower

limb since 4 days, after unusual exertion of standing and walking for 8 hours continuously for three consecutive days presenting with pricking type of pain radiating to left lower limb of acute onset along with difficulty in lying down straight and turning around in bed. Patient could not lie down in the same posture for more than half an hour. Pain aggravated on lying straight on back with extended legs in supine position and lying down turning to one side with both legs flexed relieved the pain. Patient was restless and had to change position repeatedly in every 30-45 minutes. There was no previous history of sciatica. Radiological findings showed changes at L4-S1 region, more at L4-L5. On examination Straight leg raising (SLR) test was positive. The Roland-Morris low back pain and disability questionnaire showed severe disability.^[10] Treatment was designed to relieve the pain with an integrated approach.

Method of preparation of Dashamula kwatha:

Dashamula is a collection of ten ingredients viz. *Aegle marmelos* (Bilva), *Premna integrifolia* (Agnimantha), *Oroxylum indicum* (Shyonaka), *Stereospermum suaveolens* (Patala), *Gmelina arborea* (Kashmari), *Desmodium gangeticum* (Shalaparni), *Uraria picta* (Prishnaparni), *Solanum indicum* (Brihati), *Solanum surattense* (Kantakari) and *Tribulus terrestris* (Gokshura) with Vatahara and sothahara (analgesic and anti-inflammatory) properties.^[4] One kg Dashamula coarse powder (kwatha churna) was taken and mixed by adding 16 lts of water and boiled till it was reduced to half of its initial volume i.e. 8 lts and was filtered to obtain decoction (Dashamula kwatha). The decoction hence prepared was used for seka and every day fresh decoction of Dashamula was prepared.^[11, 12]

Procedures administered to the patient:

Mahanarayana taila was made lukewarm by indirect heating and applied over back and both limbs. Abhyanga was done in anuloma gati that is from back towards the feet for 15 minutes with mild pressure over back and both lower limbs. Prepared Dashamula kwatha was maintained at warm temperatures comfortable to the patient. Seka procedure includes pouring of warm decoction continuously over the affected area for 15-20 minutes. Massage with oil promotes oleation (snigdghata) that combats dry property (ruksha guna) of vata dosha. Seka helps in reduction of inflammation, alleviates pain, relaxes the nervous system and expels excess Vata and Kapha.^[13] The local increase in temperature facilitates increase in local blood supply; relax the muscles by reducing the spasm and blocking of pain with input of temperature sensation. The ten drugs in the decoction are vatahara dravyas (that reduces aggravated vata). IFT is an external stimulus given to relax the muscle and block the pain.^[14] To

enhance the healing process of various ailments along with their respective prescribed medicaments to benefit the patients which do have soothing effects, were played during the entire treatment sessions. Treatment was given for 10 consecutive days with an integrated approach.

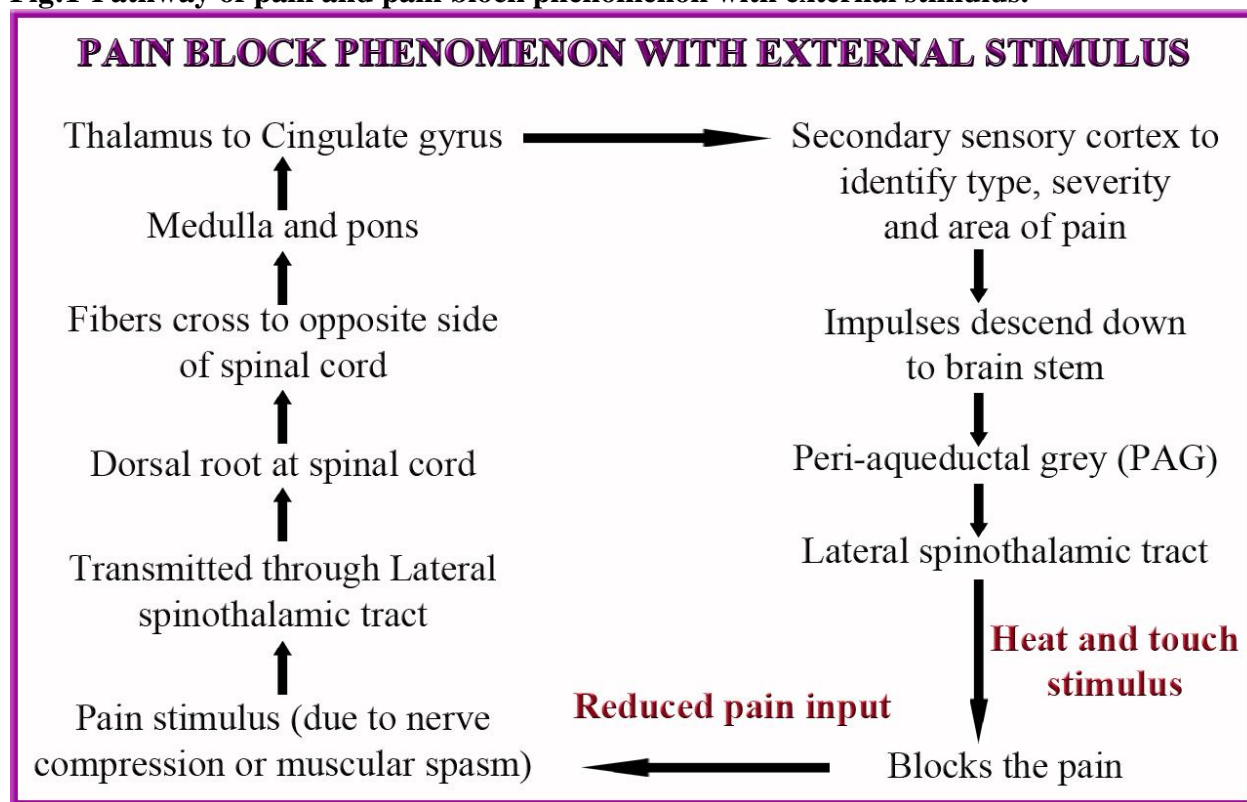
RESULTS

Patient had severe tenderness at low back radiating down on posterior aspect of left leg and could not lie straight in supine or prone position and diagnosed as vataja grudhrasi (sciatica). Treatment was designed accordingly to alleviate vata dosha with Mahanarayana taila abhyanga and Dashamula kwatha seka in anuloma gati, from lower back to both lower limbs till feet. IFT was given to back and left lower limb. Entire treatment session of 1 hour had music being played. Patient was often observed being relaxed during treatment sessions listening to music though was restless and suffered disturbed sleep due to pain round the clock for couple of days. Gradual improvement was observed after three days of treatment and complete relief after continuing the same treatment for next one week. The Roland-Morris Low Back Pain and Disability Questionnaire showed 89.7% improvement and SLR was negative after completion of the treatment for 10 days.

DISCUSSION

Neuropathic pain is caused by damage or disease affecting any part of the nervous system involved in bodily feeling (the somatosensory system). The sensory information like pain, temperature, itch and crude touch is transmitted to thalamus from spinal cord through ‘spinothalamic tract’. The pathway decussates at the level of the spinal cord, rather than in the brainstem like the posterior column-medial lemniscuses pathway and cortico-spinal tract. The pain and temperature sensations are transmitted by the dorsal fibres of spinothalamic tract. So probably the pain impulses are blocked when lukewarm Dashamula kwatha seka was performed. Dashamula is a very effective (vatahara and sothahara) analgesic and anti-inflammatory, thus might have helped in reduction of all the signs and symptoms of pain and inflammation. Non-steroidal anti-inflammatory drug (NSAID) is the most commonly prescribed drug for the treatment of inflammatory conditions but the adverse effects are the limitation in their use, Dashamula kwatha seka was used instead of NSAID for treatment in this case. The sheeta (cold) and stabdha gunas (stiff properties) of vata are pacified by ushna (hot) and swedana (sudation) by Dashamula kwatha seka. Local rise in temperature due to Dashamula kwatha seka results in vasodilatation thus improving blood supply locally and releases muscle spasm along with blocking of pain as explained in Fig:1.

Fig:1-Pathway of pain and pain block phenomenon with external stimulus.



Nerve impulses are transmitted from the ear to the brain via the auditory vestibular nerves, eighth cranial nerves. The auditory nerves connect the nerve impulses of the ears to the upper temporal lobe of the cerebral cortex. In the human brain, the primary auditory cortex is located in the temporal lobe. Human body is balanced by samyavastha of vata, pitta and kapha doshas. These elements work in a cyclic order of rise and fall during the 24 hours period. Ragas are closely related to different parts of the day according to changes in nature and development of particular emotion, mood or sentiment in the human body. Probably the tranquilizing effect of music pacifies chanchalaguna (unsteady vacillating nature) of vata and may enhance the qualities and benefits of treatment for pain relief by the process of samyavastha of tridoshas, especially aggravated vata dosha. Hence it may be interpreted that performing or listening to a raga at the proper allotted time may promote health of human beings. For example raga Kapi helps get over depression and anxiety, and raga Saranga helps in curing pitta roga. Similarly raga Madhyamavati helps improving from paralysis, giddiness, pain in legs/hands and nervous complaints. Thus pain relief may be attained with above probable mode of action.

CONCLUSION

An excruciating painful condition like sciatica was effectively treated with an integrated approach. Mahanarayana taila abhyanga, Dashamula kwatha seka and IFT treatments might have enhanced appreciable sciatic pain relief by blocking the pain path with external heat and touch stimulus; music for healing and meditation not only enhanced treatment benefits but also brought about calmness where in patient can be under mild stress due to pain. Thus sharira and manah prasannata were attained with above mentioned treatments with an amazing relief in acute sciatica (grudhrasi) without any internal medicaments like analgesics. Patient's interested being treated with less medicaments may opt integrated approach for an effective treatment benefits.

ACKNOWLEDGEMENT

Author is thankful to Dr. Sri Ganapathy Sachchidananda Swamiji and Sri Datta Vijayananda Teertha Swamiji for giving an opportunity to conduct this study at SGS Hospital. Special thanks to Dr. Sri Ganapathy Sachchidananda Swamiji for rendering His various meditation and healing compositions after an extensive research being recorded as CDs, used during the treatment sessions.

REFERENCES

1. Merskey H et al. A list with definitions and notes on usage. Recommended by the IASP subcommittee on taxonomy. PAIN 1979; 6:249–52.
2. Journal of Europe PMC. <http://europepmc.org/abstract/med/1830689> (accessed Feb 05th 2018).
3. Agnivesha, Charaka, Dridhabala, Charaka samhita, Chikitsa Sthana, Vatavyadhi chikitsa adhyaya, 28/56-57 Dash BSKR and Dr. Sharma Ram Karan, reprint 2002, Chaukhamba Sanskrit Series office, Varanasi, 1990; P-35; PP-221.
4. Shobha G. Hiremath, Text book of Bhaishajya Kalpana, Sneha kalpana, Bhaishajya Ratnavali-Vatavyadhi adhyaya; IBH Prakashana, Bangalore, 2000; P-237-238; PP-366.
5. Ravi Shekhar Singh et al. Analgesic Effects of Dashamula, an Ayurvedic Preparation, versus diclofenac sodium in animal models http://www.jcdr.net/article_abstract.asp?issn=0973-709x&year=2012&month=May&volume=6&issue=3&page=547-550&id=1944 (accessed on Feb 07th 2018).
6. Academic Search Premier. Arandjelovic P. D. et al. Music Therapy, European Psychiatry, 2010 (1), 839.
7. Antrim, Doron K. Music Therapy, The Musical Quarterly 2006 (3), 409.
8. Degemeic et al. Music as Therapy, International Review of the Aesthetics and Sociology of Music 36.2 2005 (4), 290.
9. Avadoota Datta Peetham. <https://www.dattapeetham.org/sriswamiji> (accessed Feb 21st 2018)
10. University of Washington. <https://depts.washington.edu/anesth/education/forms/pain/Roland-Morris-Questionnaire.pdf> (accessed Jan 19th 2018)
11. Acharya P.S; Sharangadhar Samhita, Chawkhamba Orientalia, 1984; P-56.
12. Shobha G. Hiremath, Text book of Bhaishajya Kalpana, Kwatha kalpana, Sharangadhara Madhyama Khanda/2; IBH Prakashana, Bangalore; 2000, P-98; PP-366.
13. Agnivesha, Charaka, Dridhabala, Charaka samhita, Sutra Sthana, Swedadhyaya, 16/13, Dash BSKR and Dr. Sharma Ram Karan, reprint 2002, Chaukhamba Sanskrit Series office, Varanasi, 1990; P-270; PP-619.
14. Journal of Neurosurgery. <http://thejns.org/doi/abs/10.3171/spi.2002.96.1.0045> (accessed Jan 23rd 2018)