

International Journal of Research Publication and Reviews

Journal homepage: www.ijrpr.com ISSN 2582-7421

A Clinical Study on the Management of Pain in Cervical Spondylosis with the Help of LM Potency

Dr. Nilesh Vasudeo Patil, M.D. (Homoeopathy)

Assistant Professor, Department of Pharmacy, Government Homoeopathy Medical College, Jalgaon - 425001 (M.S.) INDIA E-mail: <u>drnileshpatil1306@gmail.com</u>

ABSTRACT:

Cervical spondylosis is one of the most common diseases nowadays. The study is done to manage the pain of cervical spondylosis to some extent with homeopathic medicine. The treatment of cervical spondylosis pain is very effective with homeopathic medicine.

30 patients with cervical spondylosis are selected from OPD, IPD and peripheral centers. The cases were analyzed, evaluated and a well-chosen medicine was administered for LM potency.

The result of the study showed that out of 30 cases, 13 (43.33%) have marked improvement, 12 (40%) have slight improvement and 5 (16.67%) have slight improvement. Results are based on statistical analysis of pre- and post-treatment scores.

The results of the study were highly satisfactory and the role of LM potency in the treatment of cervical spondylosis pain is very effective.

KEYWORDS: Cervical Spodylosis, LM Potency, 50 Milicimal Potency, Homoeopathic Pharmacy, Homeopathy and Homeopathic Medicine.

INTRODUCTION:

Neck pain is common, usually arising from diseases of the cervical spine and soft tissues of the neck. "SPONDYLO" is a Greek word meaning vertebra and spondylosis generally refers to changes in the vertebral joint characterized by progressive degeneration of the intervertebral disc with subsequent changes in the bones and soft tissues. It covers pathology in the spine and the neurological syndrome associated with it.

In earlier times, people were affected even after the age of 60. Nowadays, the intensive use of computers and mobile phones by the young population has caused this age to decrease. Even people in their 20s and 30s are affected by cervical spondylosis.

Degeneration of the disc results in the reduction of the disc space and the formation of ferriperal osteophytes. Second, the posterior intervertebral joints become involved and cause neck pain. Osteophytes impinging on nerve roots cause radicular pain in the upper extremity. Spondylosis occurs more often in the lowest three cervical intervertebral joints (C5-C6).

The main symptoms of cervical spondylosis are related to the neck area.

There is stiffness in the neck and shoulder muscles. The pain is felt in the back of the neck. This pain can spread up into the back of the head or even into the eyes.

In some cases, this pain spreads into the shoulders, arms, and even down into the fingers.

Some patients experience vertigo, which is a sensation as if the head or surroundings are spinning. Dizziness may be felt. There are muscle spasms in the neck and shoulder area.

Homeopathy offers a very effective method of pain management in the case of cervical spondylosis. The drug is prescribed according to the general symptom. LM potencies have performed many miracles in the clinical condition. Thus, the study was undertaken to understand the role of LM in the treatment of cervical spondylosis pain.

REVIEW OF LITERATURE:

DEFINITION:

Cervical spondylosis is a chronic degenerative process of the cervical spine that affects the vertebral bodies and intervertebral discs in the neck and can progress to disc herniation, bone spur formation, spinal cord compression or cervical spondylotic myelopathy. Like the rest of the body, the discs and joints in the neck (cervical spine) slowly degenerate as we age.[1] Cervical spondylosis is a disease caused by aging that affects the discs and vertebrae of the cervical spine¹² C5,6,7 roots are most often affected.^[3]

Cervical vertebrae are easily identified by the foramen transversarium perforating transverse processes. This foramen transmits the vertebral artery, vein, and sympathetic nerve fibers. The spines are small and bifid (except for C1 and C7, which are simple), and the articular surfaces are relatively horizontal. Atlas (C1) has no body. Its upper surface bears a higher articular facet on each side on a strong lateral mass that articulates with the occipital condyles of the skull.

Just posterior to this facet, the upper part of the posterior arch of the atlas is grooved by the vertebral artery as it passes medially and upward to enter the foramen magnum. The axis (C2) bears a fossa (odontoid process) on the upper part of its body, representing the separated center of C1. Nodding and lateral bending movements occur at the atlanto-occipital joint, while rotation of the skull occurs at the atlanto-axial joint around the sockets, which act as a pivot.

C7 is the vertebra prominens, so called because of its relatively long and easily palpable non-bifid spine; it is the first clearly palpable spine as you run your fingers down the vertebral ridges, although the T1 spine immediately below it is actually the most prominent. The vertebral artery enters its vertebral course almost always at the foramen transversarium of C6; it is therefore not surprising that the C7 foramen, which transmits only the vein, is small or even sometimes absent.

Intervertebral discs are located between the bodies of adjacent vertebrae from the second cervical vertebra to the sacrum and make up about 25% of the height of the spine. Each disc has an outer fibrous ring consisting of fibrous cartilage called the anulus fibrosus (annulus - ring-like) and an inner soft, pulpy, highly elastic substance called the nucleus pulposus (pulposus - pulp-like). The discs form strong joints, allow different movements of the spine and absorb vertical shocks.

When compressed, they flatten and expand. During the day, the discs are compressed, so at night we are a little shorter. There is less compression when we sleep, so we are taller when we wake up in the morning. With age, the nucleus pulposus hardens and becomes less elastic. The narrowing of the discs and compression of the vertebrae results in a decrease in height with age.

Because the intervertebral disc is avascular, the anulus fibrosus and nucleus pulposus rely on blood vessels from the vertebral bodies to obtain oxygen and nutrients and to remove waste. Some stretching exercises, such as yoga, relax the discs and increase blood circulation, both of which speed up the discs' uptake of oxygen and nutrients and the removal of waste^[4].

ICD - 10 CLASSIFICATIONS

WHO classified spondylosis under code M47^[5]

M47.012 - anterior spinal artery compression syndrome, cervical region

M47.022 - vertebral artery compression syndrome, cervical region

- M47.12 spondylosis with myelopathy, cervical region
- M47.22 spondylosis with radiculopathy, cervical region
- M47.812 spondylosis without myelopathy or radiculopathy, cervical region

M47.892 - other spondylosis, cervical region

DEFINITION OF PAIN:

Neck pain is common, usually arising from diseases of the cervical spine and soft tissues of the neck. "SPONDYLO" is a Greek word meaning vertebra and spondylosis generally refers to changes in the vertebral joint characterized by progressive degeneration of the intervertebral disc with subsequent changes in the bones and soft tissues. It is more common in both sexes and in older age. ^[3,6]

CAUSES

Cervical spondylosis is caused by chronic wear and tear of the cervical spine.

 \Box Age: At the age of 50, it affects 50% of the population. In men, the prevalence was 13% in the 3rd decade up to 100% by the age of 70. In women, it ranged from 5% in the 4th decade to 96% over 70 years. Middle-aged people and women are more prone to cervical spondylosis. Patients usually older than 40 years.^[7]Cervical spondylosis occurs in younger individuals due to sudden protrusion of the cervical disc.^[8]

Trauma: The role of trauma in spondylosis is controversial. Repeated subclinical trauma is likely to cause spondylosis.

Uwrk activity – Cervical spondylosis is significantly higher in office workers who work long hours and look down at work.^[8]

Genetics may play a role in the development of cervical spondylotic myelopathy (CSM).

PATHOLOGY:

The water content in the nucleus bulbosus and annulus fibrosus progressively decreases with advancing age. Therefore, the deformability of the disc when changing positions is limited. The disc degenerates and the disc space shrinks.

The annulus may bulge into the spinal canal or the nucleus bulbosus may herniate.

The adjacent ligament shows hyperostosis from irritation by the degenerated disc and forms steophytes or spurs. These osteophytes can originate from the anterior, lateral or posterior border of the vertebral bodies. Posterior osteophytes extend into the spinal canal with lateral spurs and extend into the intervertebral phenomenon.

There is fibrosis of the dural sleeves around the nerve roots. The ligamentum flavum may be hypertrophied and bulge into the spinal canal during neck extension. The posterior facet joints are involved late in the process of wear of their disc, leading to vertebral instability.

Osteophytes from these joints may also extend into the intervertebral foramina and spinal canal. Spondylosis occurs more often in the lowest three cervical intervertebral joints (C5-C6).^[10]

PATHOLOGICAL CHANGES:

INTERMEDIATE PLATFORM

•The fibrosis of the ring thickens, the collagen fiber tends to separate.

•Nuclear fibrosis loses fluid and becomes more fibrous.

VERTEBRAL BODIES

•There is bending of the vertebral bodies^[11]

•Due to alteration of this periosteal traction producing mechanism by attachment of annulus fibrosis

•Decalcification in bodies with a predisposition to crush fracture

VASES

•The intervertebral ligaments can contract and strengthen

MENINGEAL SLEEVES

•The subdural mass of the spinal cord forms a sheath around the nerve root and it is subject to inflammatory changes, because the intervertebral canal clearance decreases with the narrowing of the disc space

APOPHYSAL JOINTS

•Osteophytes form at the edge of the articular surfaces and these, together with thickening of the capsule, can cause pressure on the nerve root and reduce the lumen of the intervertebral foramen.

SIGNS AND SYMPTOMS:

The vertebral levels C4/5, C5/6 and C6/7 and C5, C6 and C7 are most commonly affected.

PRESENT PATIENTS:

1. Pain and stiffness of the neck, recurring and aggravated by anxiety, tension, posture, in the morning^[12]

- Pain in the neck, radiating to the occiput, out through the shoulder, or down into the chest through the scapula.

- Radicular pain secondary to osteophytic impingement and narrowing of the outlet (radicular pain radiating down one or both arms and which may or may not be associated with muscle wasting, weakness and reflex changes).

- Myelopathy due to central spinal cord impingement, often from multilevel disease.[13] Five categories of cervical spondylotic myelopathy are described; these are based on the predominant neurological findings as follows:

o Transverse lesion syndrome - Affects the corticospinal and spinothalamic tracts as well as the posterior columns.

o Motor syndrome - mainly affects corticospinal cells or anterior horn cells.

o Central umbilical syndrome - motor and sensory impairment is greater in the upper extremities than in the lower extremities.

o Brown-Séquard syndrome - Unilateral umbilical lesions with ipsilateral involvement of the corticospinal tract and contralateral analgesia are present below the level of the lesion.

o Brachialgia and spinal cord syndrome - there is predominant upper extremity pain with some associated involvement of the long tract.

o Lower motor neuron symptom including flaccidity, wasting and reflex impairment.^[3]

1. Compression of the cervical cord which may cause

Uweakness, wasting and fibrillation in the upper limb with reduction or loss of tendon reflexes at the level of spinal cord compression.

□Paraesthesia of the arms and legs with or without impaired sensitivity of the hands and feet.

□ Involvement of the pyramidal tract with weakness, spasticity, hyperreflexia and extensor plantar reactions in the feet.^[12]

2. Headache, characteristically occipital and often described as radiating across the back of the head to the frontal region. Usually worse in the morning.

3. Vertebral basilar ischemia - often rotation to one side or the other or extension of the neck and less often flexion can cause a brief attack of dizziness or fall. Probably pressure on the vertebral arteries with subsequent disruption of blood flow to the hindbrain.

SYMPTOMS

□Cervical pain aggravated by movement.

□Referred pain (occiput, between shoulder blades, upper limbs)

□Retro orbital or temporal pain (from C1 to C2)

□Tingling, numbness and weakness in arms, hands, legs or feet^[14]

Cervical stiffness - reversible or irreversible

Dizziness or vertigo^[15]

□Poor balance

Occipital headache usually in the morning.^[16]

□Rarely syncope

PHYSICAL CHARACTERISTICS:

SPURLING'S TEST

PROCEDURE – the patient sits with the head turned and tilted to one side. The examiner stands behind the patient and has one hand placed on the patient's head. With the other hand, the examiner lightly taps (presses) the hand placed on the patient's head.

The patient tolerates this initial step of the test, after which it is repeated with the cervical spine stretched.

EVALUATION - this test provides clinical evidence of both facet syndrome and nerve root compression. Where facet joint irritation or nerve compression is present, the examination will intensify the pain. The simultaneous lengthening of the cervical spine narrows the intervertebral foramina by 20-30%. Existing radicular pain becomes worse with movement.

LHERMITTE PHENOMENON^[17]

When the neck is bent, a sensation similar to an electric shock radiates through the trunk and limbs. This indicates a lesion of the cervical cord. Lhermitte's sign is common in acute exacerbations of multiple sclerosis. It also occurs in cervical spondylotic myelopathy, subacute combined spinal degeneration, radiation myelopathy, and occasionally in spinal cord compression.

HOFFMAN'S SIGN^[17]

Hold the patient's third finger at the proximal interphalangeal joint and quickly flick the distal third phalanx. If the interphalangeal joint of the thumb or the distal interphalangeal joint of the index finger of the same hand flexes, the patient is positive

Hoffman's sign. The presence of hyperreflexia is also a sign of an upper motor neuron lesion.

SHOULDER INJURY RELIEF SIGN Kidnapping shoulder relieves pain in cervical spondylosis.^[18]

INVESTIGATION:

CERVICAL SPINE X-RAY: A plain cervical X-ray is routine in any patient with suspected cervical spondylosis.

This examination is valuable in evaluating uncovertebral and facet joints, foramina, intervertebral disc spaces, and osteophyte formation.

In some circumstances, flexion-extension views may be needed to detect instability.

- Lateral view shows loss of normal lordosis^[19], reduction of disc space and growth of osteophytes.^[20]

- Oblique view shows protruding osteophytes into intervertebral foramina.

- Lips are also visible.[21]

MAGNETIC RESONANCE IMAGING of the neck

- MRI is a very important examination if available.^[22]

- Indentation of the thecal sac, hardening of the intervertebral disc, foraminal narrowing and facet arthropathy.

- False-positive and false-negative MRI results often occur in patients with cervical radiculopathy; therefore,

MRI results and clinical findings should be used in the interpretation of root compression.

CONTRAST MYELOGRAM

- Shows disc protrusion into the thecal sac as a negative shadow with total extradural obstruction.

EMG and NERVE CONDUCTION VELOCITY TEST

- Examination of nerve root function performed^[3]

GENERAL MANAGEMENT:

□PHYSICAL AGENTS – suppress pain and muscle spasms

- Check stiffness of soft tissues and joints.

- Mobility support

□MASSAGE – deep and sedative massage manipulation such as effleuroage, circular kneading and rubbing on localized areas effectively reduce spasms and pain and thus induce relaxation.

□Exercises – neck extension, neck tilt, neck rotation^[23]

□ Cervical traction

□Manipulation

□A cervical collar is highly effective because it minimizes neck movement and relieves symptoms.^[24]

□Postural and ergonomic counseling^[25]

□Surgical intervention – if pain persists or if there is no progressive neurological deficit.

HOMOEOPATHIC MANAGEMENT:

To understand the homeopathic concept of cervical spondylosis, the classification of the disease should be known. Hahnemann classified the disease mainly into three types – indispositional, dynamic and surgical diseases. Dynamic diseases are again divided into acute and chronic diseases. Cervical spondylosis falls under chronic diseases.^[26]

LM STRENGTH:

3c is called the mother of all potencies because it is the root of the centesimal scale and the LM potency scale. LM basic potency is produced from potency 3c. Hahnemann's low potencies were 6c, 12, 24, 30 and his high potencies ranged from 50c to 200c and LM 0/1 to 0/30. In some ways, LM potencies have many positive qualities both low and high. potency in balance.

Lower LM potencies work more deeply than 6c to 30c, but are also gentler on the constitution than 200c or 1M. They reach a depth of healing without producing too strong primary effects and rapid deterioration like high Cs.

They have the stability and consistency of low potency C but have the power to heal deep chronic diseases and miasmata like high potencies.

From Hahnemann's Paris diaries, it can be said that the founder considered LM 0/1 to be a higher potency than 30c, as he sometimes started people on 30c for acute conditions and then switched to LM potency for chronic conditions.

LMs are not a "low potency" drug that can be given daily or every other day for weeks in some mechanical way. When misused, they worsen just like all other homeopathic medicines.

LM potency has the best high and low potency properties without the aggressive primary effects of Cs. If the patient will overreact to potencies higher than 30c, it is best to use lower Cs potencies such as 6c, 12c, 24c, 30c. I tend to use lower centesimal potencies in the medicinal solution and split dose where I fear deterioration, pathology and crisis. Then I work up to 30c and change to LM 0/1 and go through the LM scale.

These people don't do very well on 200c, 1M, etc. In fact, many of them are incurable by the centesimal potency system alone. Hahnemann also used this method, although Choudary Srikanta did not confirm this fact until Choudary Srikanta studied his case books many years later. Homeopathic remedies in LM potencies are superior to CM potencies for treating cervical spondylosis pain.^[27]

Hahnemann explains in a footnote to Aphorism 270: "After many laborious experiments and counter-experiments, I have found this method of new dynamization to be the most efficacious and at the same time the mildest in action, the material part of the remedy being reduced. with each dynamization (LM potency) 50,000 times and yet incredibly increased power". It is obvious that the material part through such dynamization eventually dissolves into its individual spirit essence.^[28]

Hahnemann wrote it down as 0/1,0/2,0/3,0/4......0/30. Currently the new writing style is LM/1,LM/2,LM/3..... etc. which is more scientific.^[29]

BENEFITS OF 50 MILESIMAL POTENCY:

•LM potency is the most flexible of all methods of performing homeopathy.

- •This potency is best for treating hypersensitive people.
- •It is also best for treating chronic diseases, serious pathologies and miasmata.

•Hahnemann says "Highest development of power and mildest in action".

•Medications for LM potency are milder in response.

•Frequent repetition is permissible even for long-lasting correction.

•The course of treatment can be minimized by half or even more less than with centesimal potency.^[27]

RESEARCH STUDIES

1. Homeopathic Individualized LM Potencies versus Centesimal Potencies for Pain Management in Cervical Spondylosis: A Multicenter Prospective Randomized Exploratory Clinical Trial Conducted by the Central Homeopathy Research Council during June 2009-June 2010

A multicenter prospective randomized clinical pilot study was conducted by the Central Homeopathy Research Council as its three centers during June 2009 to June 2010. Of the 148 patients examined, 56 patients were enrolled and randomized according to predetermined inclusion criteria. However, 54 patients were analyzed, LM group (n=28) and CM group (n=26). Pain was assessed using a visual analogue scale. The primary endpoint for pain is 1 to 60 days, which was calculated using the Area under the Curve method. The secondary outcome was the assessment of quality of life using the WHO QoL Bref questionnaire. Enrolled patients were prescribed medicines based on the summary of their symptoms and according to the principles of homeopathy. The area under the curve for pain was significantly smaller in the LM group [Median (IQR): 112 (86 to 299); p=0.007] after prescribing homeopathic medication showed a significant improvement in the WHO-BREF domains: only physical, psychological and environmental. Homeopathic remedies in LM potencies are better than CM potencies for treating cervical spondylosis pain.^[30]

CONCLUSION

The study sample consisted of 30 patients with cervical spondylosis from hospital, outpatient and rural health centers, and the following conclusions were obtained after statistical analysis.

This study helps to understand the role of LM potency in cervical spondylosis pain management and the various drugs that help in cervical spondylosis pain management, which can be found in the pain management table.

In this study, the maximum prevalence of cervical spondylosis was recorded in the age group of 30-40 years (36.67%). Cervical spondylosis begins only at the age of 30-40.

This study of 30 cases reports that women are highly affected by cervical spondylosis.

The study shows that housewives are mainly affected by cervical spondylosis. They could not do their daily activities because of the suffering. As it affects their usual work, the pain can be managed with homeopathy as it gives more trouble to housewives.

This study shows that people from rural areas are significantly affected by cervical spondylosis. These are caused by their work activities and the employment of persons.

This study revealed that the main factor that affects cervical spondylosis is the occupation such as tailor, farmer, driver, etc.

In this study, the most commonly used drugs were LYCOPODIUM CLAVATUM, NUX VOMICA and NATRUM MURIATICUM. The rest of the cases were treated with CALCAREA CARBONICA, KALI CARBONICUM, RHUSTOXICODENDRON, SEPIA OFFICINALIS, SULFUR, CAUSTICUM, IPECACUANHA, GRAPHITES, LACHESIS.

In this study, 30 cases treated with 2 different potencies are 0/1 and 0/3. Of which 0/3 potency in 28 (93.33%) cases, 0/1 in 2 (6.67%) cases. From this it is clear that the 0/3 potency is more indicated for cervical spondylosis.

In all thirty cases examined, there was a significant improvement in scores before and after treatment. In all cases, the intensity of the symptoms decreased significantly.

In this study, out of 30 cases, 13 (43.33%) had marked improvement, 12 (40%) had moderate improvement, and 5 (16.67%) had slight improvement. Thus, this study shows that the potency of LM is most valuable in the treatment of pain in cervical spondylosis.

Therefore, it follows from this study that in most cases there is an improvement in pain in cervical spondylosis after the administration of a homeopathic medicine.

SUMMARY:

Cervical spondylosis is one of the most common diseases nowadays. The study is done to manage the pain of cervical spondylosis to some extent with homeopathic medicine. The treatment of cervical spondylosis pain is very effective with homeopathic medicine.

The following objectives were set for the study:

- i) Know the various factors affecting cervical spondylosis.
- ii) Know the different drugs for Cervical Spondylosis.
- iii) Know about the use of LM potency in the treatment of cervical pain

Spondylosis

iv) Know the necessity of repeating the drugs in cervical spondylosis.

Thirty cases of patients with cervical spondylosis from OPD, IPD and rural health centers were randomly selected for the study. The case was taken according to a pre-structured case record format. The diagnosis was established on the basis of the clinical picture of cervical spondylosis. The case was analyzed and the whole was built. The drug was selected and prescribed according to similarity in LM potency. Pain management scores were analyzed before and after treatment. Symptomatic improvement was analyzed by pre- and post-treatment symptom scores. Thanks to this study, the different presentation and different drugs of cervical spondylosis were understood. Factors that influence cervical spondylosis were also understood through the study.

Most cases showed good improvement after treatment. Student's "t" test pre-test and post-test are used for statistical evaluation.

The result is based on the observation and outcome of the studied cases and the interpretation was made based on statistics. The following findings emerged from the study.

- The maximum prevalence of cervical spondylosis was recorded in the age group of 30-40 years (36.67%).
- · Women are highly affected by cervical spondylosis.
- · Housewives are mainly affected by cervical spondylosis.
- Residents of urban areas are mainly affected by cervical spondylosis.
- Factors affecting mainly cervical spondylosis is occupation.
- LYCOPODIUM CLAVATUM (6 cases) and NUX VOMICA (4 cases),
- NATRUM MURIATICUM is more indicated for cervical spondylosis (4 cases).
- 0/3 potency is more indicated in cervical spondylosis.
- Daily dose is more effective in cervical spondylosis.
- In all thirty cases studied, there was a significant improvement in scores before and after treatment. In all cases, the intensity of the symptoms decreased significantly.
- Out of 30 cases, 13 (43.33%) had marked improvement, 12 (40%) had moderate improvement and 5 (16.67%) had slight improvement.

The result of the study is that homeopathic medicine was very effective in managing pain in cervical spondylosis using LM potency.

REFERENCES/BIBLIOGRAPHY:

1. Cervical Spondylosis (Arthritis of the Neck) - OrthoInfo - AAOS [Internet]. [cited 2019 Apr 14]. Available from: https://www.orthoinfo.org/en/diseases--conditions/cervical-spondylosis-arthritis-of-the-neck/

2. Wang C, Tian F, Zhou Y, He W, Cai Z. The incidence of cervical spondylosis decreases with aging in the elderly, and increases with aging in the young and adult population: a hospital-based clinical analysis. Clin Interv Aging. 2016 Jan 12;11:47–53.

3. Davidson Stanley. Davidson's Principles and Practice of Medicine. 20th Edition. China: Churchill Livingstone Elsevier; 2006. p. 1221-1222, 1241-1242.

4. Gerard.J.Tortora, Bryan Derrickson. Principles of anatomy and physiology. 12th edition. p. 220

5. Switzerland. WHO. Alphabetical index, The International classification disease 10 International Statistical Classification Of Diseases and Related Health Problems. 2nd Edition. Geneva: WHO; 2004; Vol.3, 2004. p. 547.

6. Das.P.C. Textbook of Medicine: Nervous system. Kolkatta:Current Books International; Jan 2000 p.478-479.

7. Das Somen. The Spine and Pelvis. A Concise Textbook of Surgery. Fourth Edition: p. 517-518.

8. The Associations of Surgeons of India. Orthopaedic Surgery-I Diseases of Bones and Joints. Textbook of Surgery: p. 953-954.

9. The Associations of Surgeons of India. Orthopaedic Surgery-I Diseases of Bones and Joints. Textbook of Surgery: p. 953-954.

10. Maheswari, J. Degenerative Disorders. Essential Orthopaedics. 3rd Edition (Revised). Mehta Publishers: p. 254-255.

11. Tidy's. Tidy's Physiotherapy. Twelfth edition. Mumbai: 1996.

12. French's Index of Differential Diagnosis - 15th edition (2010)- Hodder Arnold publishers - Fred Heatley - p. 445.

13. Grant Cooper, MD. Pocket Guide to Musculoskeletal Diagnosis. Humana press.

Totowa-New Jersey. 2006 edition. p. 14.

14. Cervical spondylosis - Symptoms and causes [Internet]. Mayo Clinic. [cited 2019 Apr 14]. Available from: https://www.mayoclinic.org/diseasesconditions/cervical-spondylosis/symptoms-causes/syc-20370787

15. Cervical spondylosis | India| PDF | PPT| Case Reports | Symptoms | Treatment [Internet]. [cited 2019 Apr 1]. Available from:https://www.omicsonline.org/india/cervical-spondylosis-peer-reviewed-pdf-pptarticles

16. Golwalla Aspi F. Golwalla.A.Sharukh. Plexus Syndrome. Medicine for Students.Twenty-first Edition: p. 587-588.

17. Parveen Kumar., Michael Clark., Kumar and Clark Clinical Medicine. 6th edition. Online book. p. 1129.

18. Alagappan R. Manual of Practical Medicine: Nervous system. Third edition. New Delhi: Jaypee brothers medical publishers (P) LTD; p. 537-538.

19. Chauhan VK, Gupta Meeta. Homoeopathic Principles and Practice of Medicine. New Delhi: Kuldeep Jain, B. Jain Publishers (P) Ltd; 2008. p. 487-488.

20. Prof. Das.P.C. Text book of Medicine. Fourth Edition. Kolkata: Current books International; Jan 2000.

21. Das. S, A. Concise Text book of Surgery with Orthopedics and Fractures. Fourth Edition. Calcutta: Dr. Somen Das; 2006.

22. Das.P.C. Textbook of Medicine: Nervous system. Kolkatta:Current Books International;Jan 2000 p. 478-479

23. Cervical spondylosis: Exercises, treatment, and symptoms [Internet]. Medical News Today. [cited 2019 Apr 14]. Available from:https://www.medicalnewstoday.com/articles/172015.php

24. Das Somen. The Spine and Pelvis. A Concise Textbook of Surgery. Fourth Edition: p. 517-518.

25. Natarajan. Essentials of Orthopedics and Applied Physiotherapy. 6th Edition. New Delhi: B.I.Churchill Livingstone pvt Ltd; 1994. p. 119.

26. Hahnemann Samuel. Organon of Medicine. 5th & 6th Edition: B. Jain Publishers(P)Ltd., p. 114-116.

27. Choudary Srikanta. LM potency dynamization and administration. 1st Edition. New Delhi: Indian books and periodicals publishers; 2006. p. 38-40.

28. Hahnemann Samuel. Organon of Medicine. 5th & 6th Edition: B. Jain Publishers (P) Ltd., p. 230-235.

29. Patel P.Ramalal. The 50 Millesimal Potencies and Their Preparation. My Experience With 50 Millesimal Scale Of Potencies. Sixth Edition: p. 34.

30. Nayak Chaturbhuja, Singh Vikram, Gupta Jaya, Ali Mohd. Shahid, Pal Ramendar, Arya MD, Bindu Hima P, Nayak Debadatta, Goswani Paromita. Homoeopathic individualized LM potencies versus Centesimal potencies for pain management of Cervical Spondylosis: A Multicentre Prospective Randomized exploratory Clinical Study. Indian Journal of Research in homoeopathy [Internet]. 2012 [cited 2014 Jun 2]; 6(4): 16-23. Available from: http://ccrhindia.org/international.asp.