ISSN 2456-3110 Vol 7 · Issue 11 December 2022



Journal of Ayurveda and Integrated Medical Sciences

www.jaims.in

Indexed

An International Journal for Researches in Ayurveda and Allied Sciences





CASE REPORT December 2022

Effect of Balamula Ghritam Uttarabhaktika Sneha and Masha Saindhava Tailam Pichu in the Management of **Cervical Spondylosis - A Case Report**

S. Ranjani¹, Pradeep Kumar Moharana², S. Swaminathan³

¹Final Year Post Graduate Scholar, Dept. of Kayachikitsa, Sri Jayendra Saraswathi Ayurveda College and Hospital, Nazarathpet, Thiruvallur, Tamilnadu, India.

²Professor & Guide, Dept. of Kayachikitsa, Sri Jayendra Saraswathi Ayurveda Colleae and Hospital, Nazarathpet, Thiruvallur, Tamilnadu, India.

³Professor & HOD, Dept. of Samskrt, Samhita & Siddhant, Sri Jayendra Saraswathi Ayurveda College and Hospital, Nazarathpet, Thiruvallur, Tamilnadu, India.

ABSTRACT

Background: Cervical spondylosis is a degenerative condition of the cervical spine commonly called as "Osteoarthritis of the neck". As the disc dehydrate and shrink it causes protrusion and bony projections along the edges of the bone (bone spurs) of adjacent ventral bodies leading to narrowing of vertebral canal and intervertebral foramina. This causes chronic neck pain and symptoms of root compression are usually associated with pain radiating to the arms, numbness in fingers and motor weakness. Rationale of the case report: A case of 42 years old female patient with complaints of neck pain, neck stiffness, radiating pain to right upper limb weakness in right upper limb, restricted cervical range of movement and which was treated with Balāmula Ghritam given as Uttarabhaktika Sneha and Mashasaindhava Tailam as Greva Pichu. Intervention: Trikatu Churnam was given initially for 3 days then Balamula Ghritam was prescribed 10ml morning and 10ml night as Uttarabhaktika Sneha (after food) and Mashasaindhava Tailam 80ml was used as Greva Pichu in empty stomach morning for a period of 21 days. Results and Outcome: There was a marked improvement in all the symptoms which shows the efficacy of the medicines in the management of cervical spondylosis.

Key words: Disc dehydration, Balamula Ghritam, Uttarabhaktika Sneha, Mashasaindhava Tailam, Greva Pichu, Cervical spondylosis.

INTRODUCTION

Cervical spondylosis is a degenerative condition of the cervical spine producing changes in the intervertebral discs along with protrusion and bony overgrowth of adjacent vertebral bodies. This causes the vertebral canal narrowing along with the intervertebral foramen

Address for correspondence:

Dr. S. Ranjani

Final Year Post Graduate Scholar, Dept. of Kayachikitsa, Sri Jayendra Saraswathi Ayurveda College and Hospital, Nazarathpet, Thiruvallur, Tamilnadu, India. E-mail: drranjanisairam2910@gmail.com Submission Date: 16/10/2022 Accepted Date: 25/11/2022 Access this article online

Quick Response Code



Website: www.jaims.in

Published by Maharshi Charaka Ayurveda Organization, Vijayapur, Karnataka (Regd) under the license CC-by-NC-SA

by this a compression of the nerve roots, sometimes compression of the spinal cord can also occur which is termed as spondylotic myelopathy.^[1] Occupational stress, improper sitting postures, sitting in air conditioners and adopting continuously one posture, over exertion causes pressure over cervical spine with a damage to the flexibility of the surrounding tissues, cushion structures called the discs protecting the vertebrae from friction and acting as shock absorbers leading to the cause of cervical spondylosis, most common cause of cervical cord and root compression in patients older than 40 years of age.^[2] Women are more affected due to hormonal changes like deficiency of oestrogen.^[3] Spondylotic changes in cervical spine it occurs at solitary disc space levels in 15 to 40 % of patients and it occurs in multiple levels in 60 - 85% of patients and the disc between third and seventh cervical vertebra (C3 - C7) most commonly affected area. As these disorders have become inevitable due to

ISSN: 2456-3110

CASE REPORT December 2022

lifestyle modifications yet they are to be treated with conservative methods rather than surgical procedures as surgery performed may end up with recurrence of the problem. Prevalence of *Vāyu Mahābhuta* as per *Ayurveda* is said to be the primary cause for these damages to occur.

To strengthen the cervical area with the reduction of pain and to get overall improvement in the mobility of cervical spine *Balā* root having properties of *Snigdha*, *Madhura*, *Balya*, *Picchila*, *Vātahara*, *Rasāyana*, *Tridoshahara*, *Balā Ojō Vardhanam* properties as per *Ayurvedic* classics shall be a best drug for administration when used in the form of ghee preparation preferably after food after a careful analysis of the *Jatarāgni* of an individual.

As an external therapy *Māsha* and *Saindhava* processed with *Tila Tailam* shall be used warm as *Pichu* on the cervical spine area would not only stabilize but also enhances a free movement of an affected site. Hence this case study is planned to bring out the efficacy of *Balāmūla Ghritam* internally and *Māshasaindhava Tailam* externally in the management of cervical spondylosis with special reference to pain management by nourishing the disc.

CASE REPORT

A 42-year-old female, IT professional presented with complaints of gradual progressive pain in the neck region which radiated towards right upper limb along with weakness in right limb, neck stiffness, restricted cervical range of movements in the past 2 years.

Adyatana Vyādhi Vrattanta (History of present illness)

The patient developed pain in the neck region which was localized initially. Gradually the pain started to radiate to the right upper limb along with neck stiffness and weakness in right upper limb with restricted cervical range of movements and dizziness on movement of neck. The patient had undergone various neurological and orthopaedic consultations and was prescribed with pain killers and NSAID's initially and later was advised to take MRI of cervical spine with whole spine screening and was advised by allopathic physician for Surgery and physiotherapy. The prime aim of the patient was to attend our OPD to seek a non – surgical approach for her aliments. The patient was taken for the clinical trial research after signing the informed consent form.

Purva Vyādhi Vrattanta (History of past illness)

She is a K/C/O Type II DM and under taking medication.

Atura Charya / Vayakthika Vrattanta (Personal History)

Table 1: Below describes personal history of thepatient

Ahāra / Diet	Mixed (Veg and Non - Veg) type of diet
<i>Rasa</i> (Predominant taste intake)	Sarvarasa (but habitual intake of more Amla + Lavana + Katu Rasa Pradhana)
Nidra / Sleep	<i>Alpa Nidra</i> (Disturbed sleep due to pain)
<i>Vyasana /</i> habit and addictions	Coffee intake 4 times per day
Koshta	Madhyama
Agni	Vishamāgni
Marital Status	Married since 12 years

Table 2: Below describes details of Rogi Pareeksha(Dashavidha Pareeksha)

Prakriti	Vāta Kapha
Vikriti	Vāta Kapha
Sāra	Medho Sāra
Samhanana	Madhyama
Pramana	Madhyama
Satva	Madhyama
Sāthmya	Sarvarasa
Ahāra Shakti	Madhyama

ISSN: 2456-3110

Vyayāma Shakti	Madhyama
Vayo Nirnaya	Youvanam

Table 3: Below describes details of Rogi Pareeksha (Ashtasthana Pareeksha)

Nādi	Vāta Kapha
Mutram	4 - 5 times a day, Night - 1 time
Malam	Vibandha (Constipated)
Jihwa	Alipta (uncoated)
Shabdha	Prakrita
Sparsha	Anushna
<i>Drik</i> (colour of Conjunctiva)	White
Akriti	Madhyama

Table 4: Below describes details of *Rogi Pareeksha* (*Vikriti Pareeksha*)

Doshataha	Vāta Kapha
Doshyataha	Rasa, Rakta, Mamsa, Medas, Asthi
Prakrithitaha	Vāta Kapha
Deshataha	Jangala
Kālataha	Visarga Kāla
Hetutaha	Continuous work, intake of more <i>Amla, Katu, Lavana</i> <i>Rasapradhana Ahara,</i> lifting weight, continuous sitting in front of computer and air- conditioned room.
Lingataha	Neck pain, neck stiffness, radiating pain to right upper limb weakness in right upper limb, restricted cervical range of movement, dizziness on neck movements.

CASE REPORT December 2022

Table 5: Below describes details of SampraptiGhatakam

Adhistana	Grēva Pradesha
Roga Marga	Bāhya
Srōtas	Asthivaha srōtas
Srōto Dushti	Asthivaha

Table 6: Below describes Samanya Pareeksha /General Examination

Height : 155 cm	Weight : 62 kg , BMI – 26.2 kg/m ²
B.P : 130 / 90 mm/Hg	Pulse : 76 /min
RR : 21 / min	Temp : Afebrile
General look / Appearance : Healthy	Cyanosis : Absent
Oedema : Absent	Pallor : + (10.2 g/dl)
Lymphadenopathy : Absent	Clubbing : Absent

Table 6: Below describes Motor system examination

Position of limb :	Normal
Muscle Bulk :	Normal
Wasting :	Absent
Fasciculations :	Absent
Muscle tone :	Normal
Muscle power :	Grade 4 - Active movement against gravity and resistance
Coordination :	Normal (grade 5)
Reflexes (Biceps, Triceps)	Average (Normal grade 2)

Investigations

MRI Of Cervical Spine Impressions

Cervical lordosis is lost.

ISSN: 2456-3110

CASE REPORT December 2022

- The alignment of the vertebrae is maintained. No evidence of spondylolisthesis.
- Disc dehydration noted from C4-C5 to C6-C7 intervertebral discs, anterior and posterior marginal
- Osteophytes seen in C5, C6 and C7 vertebra.
- C3-C4 : postero central disc bulge causing ventral thecal sac indentation. Bilateral neural foramina and nerve roots appear normal with no evidence of spinal canal stenosis.
- C4-C5: postero central disc bulge causing ventral thecal sac indentation. Bilateral neural foramina and nerve roots appear normal. Mild spinal canal stenosis (AP diameter-9 mm).
- C5-C6: posterior disc osteophytic complex bulge with bilateral posterior para central protrusion causing obliteration of ventral thecal sac und mild compression of bilateral neural foramina and Nerve root (LR) and moderate spinal canal stenosis (AP diameter-8 mm).
- C6 C7: Posterior disc osteophytic complex bulge with posterior central protrusion with caudal migration causing compression of ventral thecal sac and severe spinal canal stenosis (AP diameter-5 mm) Bilateral neural foramina normal
- The vertebral bodies, pedicles, laminae, transverse, and spinous processes show normal morphology and MR signal pattern. The cervical spinal cord and the CSF display normal signal intensity in all sequences. The cranio vertebral junction is normal. The atlanto-axial joints are normal the pre and paraspinal regions appear normal.

Chikitsa Krama (Treatment Plan)

Patient consent: Prior to the start of the clinical study signature of the patient was taken in the informed consent form

On Examination patient had *Vishamāgni* before to the start of administration of *Ghritam, Agni* is to be corrected first. Hence patient was given *Trikatu Churnam* (5gm with ½ glass of hot water morning and

night after food) for 3 days.^[4] On the 4th day patient had good appetite, *Balāmūla Ghritam* 10 ml morning and night after food (*Uttarabhaktika Sneha*) followed by *Uşhṇajala* and also was prescribed with *Māshasaindhava Tailam Greva Pichu* morning empty stomach (80ml) for a period of 21 days.

Duration of Study Period

Clinical study carried for a period of 21 days with one follow up

Follow-Up

- Day 0 Assessment done Before treatment
- Day 22 Assessment done After treatment
- Day 30 Follow up (without medications)

Assessment criteria used in present clinical study includes

Neck pain	Grade 0	No pain
	Grade 1	Mild pain relieved on rest
	Grade 2	Moderate pain relieved on taking rest
	Grade 3	High intense pain not relieved on rest
Neck	Grade 0	No stiffness
Stiffness	Grade 1	Mild stiffness
	Grade 2	Moderate stiffness
	Grade 3	Severe stiffness
Radiating	Grade 0	No radiation
pain	Grade 1	Radiation of pain from neck to arm occasionally present
	Grade 2	Radiation of pain from neck to any one side of extremity
	Grade 3	Radiation of pain to both the sides of the extremity
Numbness	Grade 0	No numbness
	Grade 1	Numbness from neck to arm
		occasionally present
	Grade 2	Numbness from neck to any one side
	Grade 3	of extremity

Table 7: Describes the subjective parameters withclinical gradings

ISSN: 2456-3110

		Numbness from neck to both the sides of the extremity
Weakness	Grade 0	No weakness
in arms	Grade 1	Weakness in any one side of the extremity, occasionally present
	Grade 2	Weakness in any one side of the extremity
	Grade 3	Weakness in both the sides of the extremity
Dizziness	Grade 0	No dizziness
	Grade 1	Occasionally present
	Grade 2	On movements of neck patient feels dizziness
	Grade 3	Constantly dizziness is present

Table 8: Describes the Objective parameters withclinical gradings

Muscle Power Assessment	
Grade 0	No movement
Grade 1	Flickering movements
Grade 2	Active movement with gravity
Grade 3	Active movement against gravity
Grade 4	Active movement against gravity and resistance
Grade 5	Normal power

Assessment of Reflexes (Biceps and Triceps)	
Grade 0	Absent (Areflexia)
Grade 1	Diminished (hyporeflexia)
Grade 2	Average (Normal)
Grade 3	Exaggerated (Brisk)
Grade 4	Clonus, very brisk (hyperreflexia)

NDI (Neck Disability Index Score) - contains 10 Sections with 6 questions in each section

Scores Out Of (50)	Disability Level
0-4	No Disability
5 – 14	Mild Disability

15 – 24	Moderate Disability
25 – 34	Severe Disability
35 – 50	Complete Disability

Cervical Range of Movements (CROM) using Goniometer

CROM	Normal Degree (CROM)
Right lateral flexion (RLF)	43°
Left lateral flexion (LLF)	43°
Right lateral rotation (RLR)	45
Left lateral rotation (LLR)	45
Forward Flexion (FF)	38
Backward extension (BE)	38

RESULTS AND DISCUSSION

Table 9: Below describes results of assessment criteriaof patient Before and After Treatment

Assessment Criteria	Before Treatment	After Treatment	
Subjective Parameters	Day 0	Day 22 nd	Day 30 th (Follow Up)
Neck Pain	Grade 3	Grade 1	Grade 1
Neck Stiffness	Grade 2	Grade 0	Grade 0
Radiating Pain	Grade 2	Grade 0	Grade 0
Numbness	Grade 1	Grade 0	Grade 0
Weakness In Arms	Grade 2	Grade 0	Grade 0
Dizziness	Grade 2	Grade 0	Grade 0
Objective Parameters	Day 0	Day 22 nd	Day 30 th
Movements of Neck			
Flexion	38°	38°	38°
 Forward Flexion 	Restricted	38°	38°
 Lateral 	® 25°	43°	43°
 Lateral Flexion 	Left side - 43°	38°	38°

ISSN: 2456-3110

CASE REPORT December 2022

Extension (Backward) Rotation Right Lateral Rotation Left Lateral Rotation Sensory Loss Radiation Of Pain Proximal To Distal Distal To Proximal	38° Restricted Rt - 3° 45° Absent Present Absent	42° 45° Absent Absent Absent	42° 45° Absent Absent Absent
Muscle Power Assessment	Grade 4	Grade 5	Grade 5
Reflexes (Right and Left) Biceps (C5, C6) Triceps (C7, C8)	Grade 2 (Normal)	Grade 2 (Normal)	Grade 2 (Normal)

Neck Disability Index	Day 0	Day 22 nd	Day 30 th
Moderate disability (24)	24	Mild disability (10)	Mild disability (10)

Based on subjective and objective parameters assessment carried, the observation was made based on before treatment assessment followed by day 22nd assessment (after treatment) and finally observation after 1 week on day 30th (follow up) assessment revealed that all the symptoms was reduced and there was a marked improvement in the patient at the end of the treatment. All the laboratory parameter blood sugar levels were under control, the Hb level of the patient was increased to 11.5g/dl was observed.

DISCUSSION

Discussion on the Disease

Nidana Factors

Dietary factors like - excessive/ regular intake of *Katu* (pungent), *Kashaya* (astringent), *Tikta* (bitter), *Rūksha* (dry), *Laghu* (light), *Shītavir̄ya Shuskha Āharas* (cold and dried type of diet intake), *Adyasana* and *Vishamāshana* (eating fast/ irregular, eating during indigestion) Physical factors like- *Ativyāyāma*

(excessive physical strain), Adyayana (studying - table work), Prapatana (falling down), Pradāvana (excessive running), Prapēdana (pressure - neck pressure/ strain), Ratrijāgarana (waking up night/ night duties), Atibhāraharana (lifting heavy weights), excessive travel. Psychological factors like - Krodha (anger), Bhaya (fear), Shoka (stress) are all the factors leading to aggravation of Vāta Dosha in the body.^[5]

Samprapti (Pathogenesis)

Here based on the site, function, and gualities of this Kapha can be compared to nucleus pulposus of the disc that contain high water content due to the dominance of Vāyu Mahābhuta the functions such as Sandhisansleshana, Snehana, Ropana, Pūrana, Bala, Sthairya properties of Kapha gets decreased leading to degeneration of disc and osteoporosis conditions to occur as (these functions are very much significant in the intervertebral disc (symphysis joint) as well as facet joints.^[6] Since the Grēva Pradesha is considered to be the Kapha StaNa which is made up the properties like Snigdha (unctuous), Śīta (cool), Guru (heavy), Ślakṣṇa (fine), Sthira (stable) predominance of Prthvi and Jala Mahābhuta Stāna due to the above mentioned factors the aggravated Vāyu with its properties opposite to Kapha causes fast deterioration of Prthvi and Jala Mahābhuta leading to degenerative features of the cervical disc by exhibiting clinical signs and symptoms like Kārṣṇya (blackish discoloration - disc dehydration), Balāhāni (weakness), Nidrāhāni (loss of sleep), Indrivabramsha (sensory and motor impairment), Brahma (giddiness), Asthishūla (pain in bones), Majjāshōsha (decrease of bone marrow).^[7]

Sraṃsa (disc prolapse), *Pāruṣya* (roughness / loss of elastic and spongy texture of disc), *Saukṣīrya* (porosity / osteophytes formation), *Śyāva-Aruṇa Varṇatva* smoky blackish discoloration - disc dehydrated changes observed using radiological evidence.^[8]

Chikitsa (Treatment)

The theory of *Ayurveda* in the treatment of diseases is primarily based on *Panchaboutika SiddhāNtha* and based on *Guna - Karma Vikalpa* of any substance-

ISSN: 2456-3110

CASE REPORT December 2022

"Panchabhūtātmakhe Dehey Ahārō Panchabhowthikaha | Vipakwam Panchadhā Samyak Swan GunāN AbhivardhayēTh"

The above *Sloka* gives us the clue that human body is a frame constituted by the five gross elements and each of these elements gets its share of nourishment from the food consumed which is also made of *Panchamahābhutas*.^[9]

This theory clearly indicates that the action of the *Tridośhas* based on their properties end up with an increase or decrease of the visceral organs, in addition to the bone, bone marrow ends up with their destruction or reduction which finally lands up in the collapse of internal structures. So, the treatment of these collapsed structures can be repaired and brought back to normalcy, though with great difficulty is achieved by prescribing food, activity and medicine which are entirely opposite to the properties that have enhanced in the destructive process.

The drug selected for the treatment of cervical spondylosis should have high antioxidant property and having predominance of *Prthvi and Jala MahāBhuta* along with *Vātahara* quality should be considered. *Snehana* is the first line of treatment that should be done both internally and externally for bringing back the aggravated *Vāta*. Considering all the abovementioned points the drug selected for the study *Balāmūla Ghritam* and *Māshasaindhava Tailam* exactly possess the same qualities, best choice of drug for the management of cervical spondylosis (degeneration of cervical spine).

Discussion on the drug taken in present clinical study

Balāmūla Ghritam

The Ghritam which contains Balāmula has Madhura Rasa, Snigdha Guna, Śīta VīRya, Madhura VipāKa and it is having qualities like Brimhana, Balya, Vrishya, Vāta- Pitta Hara, ŌJovardhaka, Rasāyana, Snehana and Anulōmana. On the other hand, the Go Ghritam contains has a special property like Samskārasyānuvartana, Sahasravīrya and Karma Shasrakrit by which it enlightens the property, potency, and therapeutic action of the drug with which it is processed without compromising its own properties. When the Balāmūla Ghritam was prescribed 10ml after the breakfast and dinner as Uttarabhaktika Sneha in the case of cervical spondylosis with an intention of digesting in 3 hours' time to enhance its digestion 30ml of Ushna Jala (hot water) was prescribed. Hot water has a nature of liquefying any solid material due to its Dīpana, Pācana property and by making an enroute entry into the solid material thereby bringing its disintegration. All the properties of Balāmūla Ghritam on its rapid digestion and absorption becomes the first essence for its onward transmission through the blood stream to the site of damage and it replaces the lost qualities of Prthvi and Jala Mahābhuta to get filled up in the Grēva Pradesha with the new arrival of the essence of Balāmūla Ghritam.^[10]

Māshasaindhava Tailam^[11,12,13]- *Māshasaindhava Tailam* possess *Snigdha*, *Guru*, *Uṣhṇa Veerya* when used as warm *Pichu* the active principles in it gets enhanced and comes in contact with *Brājakāgni* and gets absorbed by *Brājakapittha* and taken to the targeted site. Since this *Tailam* possess qualities like *Tridoshahara*, *Balya*, *Snehana*, *Vēdanasthāpana*, *Nādibalya*, *Brimhana*, *Vranashōdana* and Yōgavahi properties and has more of *Asthi-majjāveshēshatwam* due to its combination it can replace the lost qualities of *Pṛthvi* and *Jala mahābhuta* by reducing the *Rūksha*, *Laghu*, *Karaguna* of *Vāyu* in *Grēva pradesha*.

Pharmacological Effect of Balāmūla Ghritam

The root of *Balāmūla Ghritam* possesses antiinflammatory, analgesic,^[14] antioxidant,^[15] neuroprotective^[16] and anti-osteoarthritic properties^[17] and acts as best nervine tonic and immunomodulator.^[18] The betaine and choline chemical components also maintain the structural integrity of bone.^[19,20]

Pharmacological effect of *Māshasaindhava Tailam*^[21]

- *Māshasaindhava Tailam Pichu* application and its absorption through Trans epidermal layers with its compound like linoleic, oleic acid, helps to repair the tissue damage and have an effect on reducing the inflammatory changes and promotes the bone mineral

ISSN: 2456-3110

CASE REPORT December 2022

density and strengthens the bone. There by the neurological and locomotory functions are enhanced.

CONCLUSION

Cervical spondylosis is not only a mechanical defect but also an anatomical fault which ends up with radiculopathy, myelopathy etc. If not treated in time as the wear and tear is so rapid to occur due to factors like skull weight, sedentary postures and due to occupation. Conditions like herniated disc, thinning of disc, nerve cord compression, hypertrophy of facet joints etc. need an immediate attention. In Ayurveda management the tissue repair and nutritional supply to the cervical spine can be made possible with the prescription of medicated ghee prepared with Balāmūla administered after food by considering the Jatarāgni's digestive capacity, place a vital role in the supply of nutrients in the form of properties and action to the required site is the need of the hour. With the internal prescription of Balāmūla Ghritam, the internal arrival of the property enhancement at the site of loss of those properties is made for the replacement of lost properties by treating the spot with the external therapy also. For this purpose, Māshasaindhava Tailam has the result of recovery on a very positive note.

PATIENT CONSENT - Patient was provided written consent form for publication.

REFERENCES

- McCormack B, Weinstein P. Cervical spondylosis An update. The Western journal of medicine. 1995 Nov 30; 165:43–51.
- Shan.N. Siddharth, API Textbook of Medicine, 7th edition 2003, The association of physicians of India, p. – 853-856.
- 3. Riggs BL. The mechanisms of oestrogen regulation of bone resorption. J Clin Invest. 2000 Nov 15;106(10):1203–4.
- T. Sreekumar, Astanga hridaya Vaghbhata (English transulation and Commentary) 2015th ed. Vol. 1, Publication Department Harisree Hospital; Kerala, Sutrastana 6/162 - 166, p.- 207
- Priya Vrat Sharma, Susrutha Samhita with English translation and Dalhana's commentary). 2004th ed. Vol.2, Varanasi: Chaukhamba Visvabharati Sutrastana 21/19, p.- 231

- T. Sreekumar, Astangahridaya Vaghbhata (English transulation and Commentary) 2015th ed. Vol. 1, Publication Department Harisree Hospital; Kerala, Sutrastana 12/ 15,16, p. 269
- T. Sreekumar, Astangahridaya Vaghbhata (English transulation and Commentary) 2015th ed. Vol. 1, Publication Department Harisree Hospital; Kerala, Sutrastana 11/5,6 p. 248
- T. Sreekumar, Astangahridaya Vaghbhata (English transulation and Commentary) 2015th ed. Vol. 1, Publication Department Harisree Hospital; Kerala, Sutrastana 12/ 49-50, p. 277
- T. Sreekumar, Astangahridaya Vaghbhata (English transulation and Commentary) 2015th ed. Vol. 1, Publication Department Harisree Hospital; Kerala, Sutrastana 1/28 p. 42.
- T. Sreekumar, Astangahridaya Vaghbhata (English translation and Commentary) 2015th ed. Vol. 1, Publication Department Harisree Hospital; Kerala, Sutrastana 13, p.- 345.
- P.S Varrier Vaidhyaratnam. Indian Medicinal plants. 1997th ed. Chennai: Arya Vaidhya Sala, kottakkal, orient Longman limited; p. 367.
- Dr. Apeksha. J. Kotangale & Dr. U. J. Shirke, The Conceptual Study of Saindhava Lavana (Rock Salt) in Ayurveda and its Relevance in Moderna Era -A Review, Journal (AIIRJ), Vol-7, july 2020.
- P.S Varrier Vaidhyaratnam. Indian Medicinal plants. 1997th ed. Chennai: Arya Vaidhya Sala, kottakkal, orient Longman limited; p. 104.
- 14. Sutradhar RK, Rahman AK, Ahmad MU, Bachar SC. Bioactive flavones of Sida cordifolia. Phytochem Lett 2008;1(4):179-82.
- Auddy B, Ferreira M, Blasina F, Lafon L, Arredondo F, Dajas F, Tripathi PC, Seal T, Mukherjee B. Screening of antioxidant activity of three Indian medicinal plants, traditionally used for the management of neurodegenerative diseases' Ethnopharmacology 2003; 84: 131-138.
- Khurana N, Sharma N, Patil S, Gajbhiye A. Phyto-Pharmacological Properties of Sida Cordifolia: A Review of Folklore use and Pharmacological Activities. Asian Journal of Pharmaceutical and Clinical Research. 2016 Oct 1;52–8.
- Sharma AK. Medicinal Properties of Bala (Sida Cordifolia Linn. and its Species). International Journal of Ayurveda and Pharma Research [Internet]. 2013 [cited 2022 May 10]; Available from: https://ijapr.in/index.php/ijapr/article/view/40
- Jain A, Choubey S, Singour PK, Rajak H, Pawar RS. Sida cordifolia (Linn) – An overview. Journal of Applied Pharmaceutical Science. :p: 8.
- Yajun W, Jin C, Zhengrong G, Chao F, Yan H, Weizong W, et al. Betaine Attenuates Osteoarthritis by Inhibiting Osteoclastogenesis and Angiogenesis in Subchondral Bone. Frontiers in Pharmacology [Internet]. 2021 [cited 2022 Aug 18];12. Available from:

CASE REPORT December 2022

https://www.frontiersin.org/articles/10.3389/fphar.2021.723 988

20. What Is Choline? An Essential Nutrient with Many Benefits Healthline. 2018 [cited 2022 Aug 18]. Available from: https://www.healthline.com/nutrition/what-is-choline

ISSN: 2456-3110

 Wacal C, Ogata N, Basalirwa D, Sasagawa D, Kato M, Handa T, et al. Fatty Acid Composition of Sesame (Sesamum indicum L.) Seeds in Relation to Yield and Soil Chemical Properties on Continuously Monocropped Upland Fields Converted from Paddy Fields. Agronomy. 2019 Dec;9(12):801. **How to cite this article:** S. Ranjani, Pradeep Kumar Moharana, S. Swaminathan. Effect of Balamula Ghritam Uttarabhaktika Sneha and Masha Saindhava Tailam Pichu in the Management of Cervical Spondylosis - A Case Report . J Ayurveda Integr Med Sci 2022;11:206-214.

Source of Support: Nil, **Conflict of Interest:** None declared.

Copyright © 2022 The Author(s); Published by Maharshi Charaka Ayurveda Organization, Vijayapur (Regd). This is an open-access article distributed under the terms of the Creative Commons Attribution License (https://creativecommons.org/licenses/by-nc-sa/4.0), which permits unrestricted use, distribution, and perform the work and make derivative works based on it only for non-commercial purposes, provided the original work is properly cited.