



Application of Krikatika and Amsa Marma Chikitsa can play a potential role in management of Cervical Spondylosis: A review

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ABSTRACT

In ancient literature like Vedas and in classics of Ayurveda the concept of Marma was limited to the war science and Marma points were mainly considered as only fatal points i.e., trauma to them leads to debility or even death as these are seat of Prana (life energy). As Prana effects all aspects of a person that is – physical, mental, social as well as spiritual, so Marma may be assumed to be those important seats of psycho-neuro-endocrino- immunological pathways which may be influenced in order to regulate the physical, mental and spiritual functions. Occupational health, word itself reflects “Health of the worker at the work place”. In this modernized era, each individual is indulged in improving their socioeconomic status for better survival. Working environment tends to demand more from an individual that takes more tolls over the health and wellbeing of individual leading to a number of occupational disorders like carpal tunnel syndrome, computer vision syndrome, cervical Spondylosis and many others among which cervical Spondylosis is being faced earlier and gaining importance in terms of treatment. Stimulating Marma points directly by applying pressure, vibrating tendons, pinching or application of hot and cold pastes, oils and ointment on Marma depending on the type of Marma had emerged as new dimension in non pharmacological treatment of Ayurveda. The Krikatika and Amsa Marma chikitsa can be used to alleviate the pain of cervical spondylosis as well as it has potential to modify the disease to maintain the homeostasis of the cervical spine region.

Keywords- Krikatika, Amsa, Marma, Cervical Spondylosis

INTRODUCTION

Ayurveda is considered as one of the oldest of the traditional systems of medicine. Ayurveda is the Science of life. Sharir Rachana is the branch of Ayurveda which states a detailed description of the structures in human body. In Atharvaveda the King and the warriors have been instructed to protect their marma Sthanas with the help of armour so that the same may not get injured during the course of the war in battle field. Varundeva provide you joy, may your victory is celebrated among deva gana.ⁱ In eighth Kanda of Atharvaveda there is standing instruction for killing the wretched persons. Addressing the Agni, it has been said that let the Agni attack on the Marma of the wretched persons by the help of it's fire flame.ⁱⁱ

Marma

Acharya Sushruta has elaborately described the concept of marma i.e. vital points in the body in Sushruta samhita sharira sthana adhyaya-6 named pratyekamarma-nirdesh shariram and in many places in samhita.ⁱⁱⁱ Marma is constituted by confluence of mamsa, sira, snayu, asthi and sandhi.^{iv} Marmas are the seats of soma, maruti and tejas and three gunas i.e. raja, satva and tama, and the bhutatma. Therefore any trauma to these marmas can cause death.^v Ayurveda explains many vital points of anatomical and physiological significance. These points are called as 'Marma'^{vi} Prana circulates throughout the body and these Marma points acts as junctions where Prana is specially seated. Any injury affecting the Marma Sthana results in disturbance in the flow of Prana leading to the manifestation of the disease. Manipulating and stimulating Marmas in proper manner improves flow of Prana in the body. In Ayurveda they explained Marma points but there is lack of description about Marma Chikitsa. Siddha system^{vii} of medicine gives detailed description about Marma Chikitsa and manipulation methods over these points Acharya Sushruta has classified marmas based on site, anatomical structure, and its traumatic affects.

Marma Chikitsa

On Marmas, pressure are applied, tendons are vibrated, deep pinching of skin and subcutaneous tissues and muscles, generates pain sensation to the patient. The amplitudes of these techniques varies according to age, disease and patient's pain threshold and type of Marma point. If the patient is child, female or of old age the techniques should be applied with low amplitude. The pain threshold of the patient can be assessed by the facial expression of the patient and the pain generated during the chikitsa can be alleviated by deep breathing or diversion of mind through conversations and re-assurance. Maximum pressure can be applied on Sandhi, Asthi, Mamsa and Snayu Marma but Sira Marma should not be pressed forcibly, gentle massage in upward, downward and from center to peripheral direction should be done at these site. Sometimes patient may feel giddiness, discomfort due the pain generated then the patient must be placed in recumbent position with keeping head low and lifting leg up and massage of palm and sole alongwith Talahridya Marma pressing should be done.^{viii} Marma stimulation can be done 3-5 times a day in the same rhythm. The rhythm of stimulation is same as the rhythm of respiration i.e., approx. 18 to 20 times per minute. Each time the stimulation can be done for 3 minutes.

krikatika marma

krikatika marma is one which is situated on shirogreeva sandhane i.e. at craniocervical joint on the neck so it is sandhi marma i.e. vital point constituted by joints. Injury of these marma leads to condition called Chalmurdhata i.e. instability of cranio-cervical junction^{ix}.

Amsa Marma

Amsa Marma lies between the tip of arm and neck binding Amsapitha and Skandhas are Amsa Marma.^x Injury there to causes loss of function of arm. Amsa Marma is Vaikalyakara Marma as well as Snayu Marma.^{xi}

MARMA ^{xii}	RACHANA	PARINAMA	PRAMAANA
KRIKATIKA	Sandhi marma	Vaikalyakara marma	½ anguli
AMSA	Snayu marma	Vaikalyakara marma	½ anguli

Cervical spondylosis

Cervical spondylosis is a degenerative condition of the cervical spine. There is degeneration of inter-vertebral disc, with its protrusion and bony overgrowth of adjacent vertebrae causing compression of roots, cord or both. Occasionally it is associated with non-compressive myelopathy consequent to vascular degeneration (API medicine). It is the most common cause of nontraumatic myelopathy, resulting in paraparesis and quadriparesis. The incidence of neck pain in adults is approximately 20-50% per year, much of which is caused by spondylosis.^{xiii}

Spondylosis is defined as a noninflammatory process occurring primarily because of disk degeneration around the amphiarthrodial joint formed by adjoining vertebral bodies and the disk between them. Disk degeneration and development of spondylosis are part of the normal aging process. Approximately 95% of people by age 65 have cervical spondylosis to some degree.^{xiv} The degeneration can eventually worsen and cause either compression of exiting cervical spinal nerves or of the cervical spinal cord.

Pathophysiology

Degeneration of the intervertebral discs- The first step in such spinal degenerative change is desiccation of the disk. The end plates have several channels that allow for vascular exchange of nutrients between the vertebral body and intervertebral disk. Repetitive movements eventually lead to fatigue and thinning of the end plates. As the vascular supply is compromised, the central portion of the disk begins to lose its proteoglycan matrix.^{xv} The disk also begins to desiccate, losing its hydrophilic properties, and becomes more compressible. Along with the loss of water content is a loss of chondroitin sulfate, which provides elastic properties, and the chondroitin sulfate is replaced with keratin sulfate.^{xvi} This process leads to gradual loss of disk height and bulging of the disk posteriorly as the dorsal annulus is thinner. As the spondylosis proceeds, the disk can bulge further. This is sometimes accompanied by disk herniation through an annular tear, which forces the posterior longitudinal ligament to peel off the surfaces of adjacent vertebral body.

Osteophyte (bony growth) - The herniated disk irritates the dorsal ends of adjoining vertebrae, causing reactive bone formation or osteophytes. If a significant amount of bone is formed, the cervical cord can become compressed, a condition termed cervical hyperostotic myelopathy.^{xvii} Posterior disk osteophyte formation can result in kyphosis.

Narrowed spinal canal - The posterior elements of the spine also undergo changes such as facet joint hypertrophy and hypertrophy of the ligamentum flavum. All these cumulatively cause a reduction in sagittal canal diameter. Normal canal diameter in the cervical region averages from 17 to 18mm (mm) and compression of the cord can be evident when the diameter reaches below 13 mm.^{xviii}

Insufficient blood supply –

Spinal cord ischemia can also play a significant part in the development of myelopathy from spondylosis. Pathologic specimens show injury of the gray matter and medial white matter, consistent with a central cord

syndrome from ischemia. Ischemia injury of the cord in spondylosis is rarely from blockage of major arteries, but rather from microperfusion defects because of chronic concussion of the cord.^{xix}

Discussion

Probable mode of action of Marma chikitsa: As in Cervical Spondylosis there is compression of the nerve fibres of the Cervical spine and all the treatment modalities are not so effective as they provide pain relief for some time. Marma Chikitsa which is the precise art of touching an individual in exactly the right place at a critical moment in time, for the purpose of healing and serve as point of access to the body's innate intelligence, opening the doorway to health and wellbeing can lead to release in that energy blockage and can lead to permanent cure.

The Marma chikitsa of stimulation or manipulation can be used as a part of a rejuvenation therapy or it could be used as preventive measure from unwanted conditions.

Marma Chikitsa works on the neuro-endocrine system. Actually, due to pressure or stimulation over these points, certain chemical substance and neurotransmitters are release like endorphins and enkephalin which send nerve impulse to brain causing the desired effect. Another theory state that the very small electrical changes that occur at Marma points is found to capable of producing effect for in responsible for triggering the desired effect. Stimulation of Krikatika and Amsa marma can be used to reduce the pain of cervical spondylosis.

Conclusion

The Krikatika and Amsa Marma chikitsa can be used to alleviate the pain of cervical spodylosis as well as it has potential to modify the disease to maintain the homeostasis of the cervical spine region as Marma chikitsa has multi dimensional effect that is – physical, mental, social as well as spiritual.

ⁱ Sharma S, Sharma BD. Atharvaveda samhita - saral Hindi bhavarth sahit - part 1 to 2 (Hindi). Gayatri Tapobhumi, Mathura, Uttar Pradesh, India: Yug Nirman Yojna Vistar Trust; 2014.

ⁱⁱ Sharma S, Sharma BD. Atharvaveda samhita - saral Hindi bhavarth sahit - part 1 to 2 (Hindi). Gayatri Tapobhumi, Mathura, Uttar Pradesh, India: Yug Nirman Yojna Vistar Trust; 2014.

ⁱⁱⁱ Shastri A, Sharira sthana, Sushrut samhita, Chapter 6,Chaukhamba Sanskrit Santhan, Varanasi, 2018,P-67-78

^{iv} Shastri A, Sharira sthana, Sushrut samhita, Chapter 6,Chaukhamba Sanskrit Santhan, Varanasi, 2018, P-67

^v Shastri A, Sharira sthana, Sushrut samhita, Chapter 6,Chaukhamba Sanskrit Santhan, Varanasi, 2018, P-77

^{vi} Acharya YT(Ed), Sushruta Samhita of Sushruta with Nibandha Sangraha Commentary by Shri Dalhanacharya and the Nyayachandrika Panjika of Sri Gayadasacharya on Nidanasthana Varanasi, Chaukhambha Sanskrit Sansthan, Reprint 2014, pp-824, page-369,372

^{vii} Shanmugom N, Basic concepts of medical - kaibhagam and seibhagam, Thirumoolar vermology institute, April 2017,1stedition, Coimbatore, pp217

^{viii} Dr.Sunil Kumar Joshi, Marma Science and Principles of Marma Therapy. Vani Publications, New Delhi, First edn, Page 59-62,73

^{ix} Sushruta Samhita, Shareerasthana, Pratyeka marma nirdesha shaarir, Chapter 6 Jadhavji T. Acharya, Reprinted edition 2008. Varanasi: Choukmbha Surabharati Prakashan

^x Shastri AD: Sharir Sthana, Chapter 6/24 in Sushruta Samhita Vol.1. Reprint. Editor: Shastri AD, Mehta MP. Chowkhamba Sanskrit Sansthan. 2013: pg 71.

^{xi} Shastri AD: Sharir Sthana, Chapter 6/25 in Sushruta Samhita Vol.1. Reprint. Editor: Shastri AD, Mehta MP. Chowkhamba Sanskrit Sansthan. 2013: pg 72.

^{xii} Prof.K.R. Srikantha Murthy, *Sushruta Samhita, Sharira Sthana*, Chapter-6, Publisher-Chaukhambha Orientalia, Varanasi, Vol-1 Reprint Edition 2016

^{xiii} Clark CR, Benzel EC, Currier BL, et al. The Cervical Spine, 4th ed. The Cervical Spine Research Society Editorial Committee. Philadelphia, PA: Lippincott Williams and Wilkins, 2005.

^{xiv} Garfin SR. Cervical degenerative disorders: Etiology, presentation, and imaging studies. Instr Course Lect 2000;49:335-8.

^{xv} al-Mefty O, Harkey HL, Marawi I, et al. Experimental chronic compressive cervical myelopathy. J Neurosurg. Oct 1993;79(4):550-61.

^{xvi} Shedid D, Benzel EC. Cervical spondylosis anatomy: Pathophysiology and biomechanics. Neurosurgery 2007;60:S7-13

^{xvii} Shedid D, Benzel EC. Cervical spondylosis anatomy: Pathophysiology and biomechanics. Neurosurgery 2007;60:S7-13

^{xviii} Bohlman HH, Emery SE. The pathophysiology of cervical spondylosis and myelopathy. Spine 1988;13:843-6.

^{xix} al-Mefty O, Harkey HL, Marawi I, et al. Experimental chronic compressive cervical myelopathy. J Neurosurg. Oct 1993;79(4):550-61.