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EFFECTS OF YOGASANAS IN THE TREATMENT OF CERVICAL SPONDYLOSIS

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ABSTRACT

Cervical spondylosis is one of the most common disorder of the cervical region, which is caused by degenerative changes in the vertebral and intervertebral discs. Unhealthy life style includes wrong and improper eating habits, over or under intake of required calories, over sleeping, suboptimal body activities and more important abnormal body postures during driving, working on the computer and reading generate under pressure and stress injury to the spine and play an important role in producing this disease. It is estimated that less than 25% people below 40 years of age are facing Cervical spondylosis. *Yoga* practices have been found to be better and effective alternative therapy in the cervical spondylosis. *Yoga asanas* like- *Bhujangasana*, *Ardhamatsyendrasana*, *Ustrasana*, *Gomukhasana*, *Matsyasana*, *Makarasana*, *Akarna Dhanurasana* along with the sookshma vyayam like *skandha sanchalana* *Greeva sanchalana* etc. are highly beneficial in Cervical spondylosis .

Keyword: Cervical spondylosis, intervertebral discs, *Asanas*, *Yoga*

INTRODUCTION

A healthy and peaceful life has been adored wish of people since age, but now a day due to fast advance technology epoch, desk bound

lifestyle and lack of time, people cannot concentrate on their proper regimens and facing so many problems. One such a big

problem is cervical spondylosis [1]. Occupational stress, curved and wrong sitting posture, unnecessary sleeping, excessive travelling etc. lead to spondylitic changes in cervical spine region [2].

Cervical spondylosis is originated by degenerated disc disease and often causes intermittent neck pain in middle aged and elderly patients. It's a wear and tear procedure of cervical spine which become a common problem in present time. Psychological risk factors, such as long term stress, lack of social support, anxiety, and depression are also important role playing for neck pain. In Most people with degenerative changes of cervical spine remain asymptomatic are usually older than 30- 40 years of age and present with symptoms that are caused by the compression of neural structures [3]. There are three main symptoms related to cervical spondylosis patients are usually beyond the fifth decade, and long tract sign are a hallmark. It is more common in men and in laborers. The symptoms include neck pain, sub-scapular pain, or shoulder pain shock like sensation in the limbs [4]. Due to cervical spondylosis, nerve root compression commonly occurs at the C5 to C6 levels, although higher levels can be also affected. Neurological features follow a segmental distribution in the upper limb, with sensory

symptoms (shooting pains, numbness, hyperesthesia) being more common than weakness [5].

Yoga relaxation technique has important role in the treatment of cervical spondylosis, which can be practices in spine or sitting posture for achieving the goal of positive health, improving will power, concentration and relieving pain and stiffness in neck [6]. At the present time benefit of the physical exercise and the popularity of *yoga* have increased among the older peoples. Although *yoga* exercise has been shown to be effective for improper spine mineral density and decreasing inflammation risk [7]. The Cervical spondylosis is a life style disease which is not restricted to any age group. No medical technique has permanent cure to disease. *Yogasanas* tend to be a stimulator of cervical muscles which automatically helps to use pain of cervical region as well as creates a distance form deleterious pain killers and are accessible flexible and less expensive technique with prolong benefit in cure of cervical spondylosis.

Pathophysiology

The pathogenesis of cervical spondylosis entail a worsen situation that make biomechanical changes in cervical spine, the main pathophysiological process involved in the essential degenerative occurrence leading

to cervical spondylosis. It is manifesting as secondary compression of neural and vascular structures. It starts with the cervical disc desiccation an increase in the keratin – chondroitin ratio prompts changes to the proteoglycan matrix resulting in loss of water, protein and mucopolysaccharides with age allow the nucleus pulposus to lose elasticity and to become smaller and more fibroses. The annulus fibroses then takes on more of responsibility for weight bearing and likely to bulge into the spinal canal as the inter space loses height. This loss of disc space height initially occurs ventrally and may lead to loss of cervical lordosis. More forces are then placed on the ventral aspect of the vertebral bodies leading to a kyphotic deformity [8, 9].

Stress in cervical spondylosis: Stress and cervical spondylosis have an invariable relationship with each other. Many studies have shown that stress is a widely spread problem in the current era. Due to the daily issues, peoples feel so many burdens on their mental health. Persons with stress and depression are likely to have improper posture, which may lead to postural complications. Abnormal posturing may be a sign of certain injuries to spinal cord. Cervical spondylosis is at increased risk of stress. Mental problems also cause physical problems. Stress is an outcome of modern

lifestyle. It is produced out of dissatisfaction and abjection when there is negative interaction between the self-projection and the adverse internal as well as the external environmental conditions. At present, the human existence is challenged by the stress disorders such as psychosomatic disease, mural disease, cardio vascular disease [10].

Effective Asanas in the management of cervical spondylosis

The system of *Yoga* is not developed for the purpose of treatment, It has been observed through the applied research that the regular practice of *yoga* not only control these diseases but also promotes and maintain the health of body and mind and prevents the disease process [11].

Yoga has also been found to be an effective tool in reducing the levels of pain and stress. *Yoga* is an adequate technique for playing important roles in the treatment of cervical spondylosis, they can be practiced in supine or sitting posture for achieving the goal of positive health, willpower, concentration, and relieving pain and stiffness of the neck.

Tadasana, Ardhamatsyendraasan, Bhujangasana, Gomukhasana, Dhanurasana, Ushtrasana, Matsyasana, Naukana, Surya namaskar and sookshma vyayam like Skandha sanchalana, Greeva sanchalana are

beneficial in cervical spondylosis for reducing pain and neck stiffness [12].

The physical benefits of *yoga* are myriad. *Yogasanas* have a profound impact on the system of human being. The body becomes more flexible and more able to adjust to environmental changes after practicing *asanas*. *Yoga* keeps our body strong, as it involves all the muscles in our body to hold and balance *yogasanas*. The various *yoga* postures strengthen our feet, hands, fingers, lower back and shoulders [13, 14]. The group of muscles affected by particular type of *yogasanas* can be tabulated as follow-

A. Bhujangasana: It alleviates patients suffering from cervical spondylosis. It effectively stretches and strengthens the trapezius muscle and deep cervical flexure. It stretches shoulder and chest muscles and decreases stiffness of the shoulder and neck joint which increases flexibility in upper back region. *Bhujangasana* effort to maintain the posture, the muscles are stretched against some resistance from the joints and the tendons. This increases the muscular tension.

B. Ardhamatsyendrasana: it increases the elasticity of the spine, tones the spinal nerves and strengthens of Levator scapulae, Sternocleidomastoid and improves the functioning of spinal cord. It helps in cervical spondylosis and loss of appetite.

Ardhamatsyendra asana is one of the most effective poses for isolating these hard-to-access muscle. This asana work by safety stretching muscles and all other soft tissues and ligament which provides flexibility that also improves the core strength of people.

C. Makarasana: in sanskrit word ‘*Makar*’ means Crocodile and *Makarasana* it is a effectively straighten of Erectors spinae. This *yogic* pose is useful for people suffering from cervical spondylosis and neck stiffness.

D. Ushtrasana: In Sanskrit word *Ushtra* means Camel this *asana* first subjects were asked to sit on the floor with stretching his legs and keeping his spine erect, keeping palms on the ground side by the buttocks. Then bend the leg by the knees and sit on the heels placing the buttocks between the heels, knee on floor keeping the knees in line with the shoulders and sole of the feet facing the ceiling. Hands were kept on thighs, along with inhaling; arched the back and placed the palms on the heels of the feet, keeping the arms straight. The neck was kept in natural position without any strain. This *yogic* pose is useful for people who are suffering from neck pain. It is effectively straighten of Erectors spinae.

DISCUSSION

Yoga therapy is not a miracle therapy. It would be no exaggeration that is a one solution of all problems. It is not one pill for all ills. There

should be no false claims or tall claims made in this field because *yoga* therapy is also a science. Cervical spondylosis is a common condition in which there is degeneration of the cervical spine, which can lead to symptoms such as neck pain and stiffness. *Yogasana*, a form of *yoga*, has been shown to have potential benefits in managing cervical spondylosis. Practicing these *Yogasana* can improve posture, which is important in the management of cervical spondylosis, as poor posture can place additional stress on the cervical spine [15]. Furthermore, certain *Yogasana* poses can target specific areas of the neck and upper back, providing a gentle and effective form of physical therapy for the cervical spine. These *Yogasanas* works on cervical spondylosis through several mechanisms. Firstly, it improves flexibility and range of motion in the neck and upper back through various stretching and strengthening exercises. This can help alleviate the pain and stiffness associated with cervical spondylosis by reducing the pressure on the spinal nerves and joints. Secondly, *Yogasana* can improve blood flow to the cervical spine by increasing oxygen and nutrient delivery to the affected areas. This can help promote healing and reduce inflammation in the cervical spine, which can further reduce pain and improve function.

Yogasana can help reduce stress and anxiety, which can have a significant impact on cervical spondylosis symptoms. Stress can cause muscle tension and tighten the neck and upper back, exacerbating symptoms of cervical spondylosis. *Yogasana*, through its focus on breathing and relaxation, can help reduce stress levels, leading to a reduction in muscle tension and pain. Overall, *Yogasana* can help improve posture, which is important in the management of cervical spondylosis. Poor posture can place additional stress on the cervical spine and lead to further degeneration [16]. By promoting proper alignment and strengthening the muscles that support the neck and upper back, *Yogasana* can help reduce the stress on the cervical spine, leading to a reduction in pain and improved function.

CONCLUSION

The scientific importance of *Yogasana* in the management of cervical spondylosis lies in its ability to improve flexibility, strength, blood flow, posture, and reduce pain and stiffness, making it a safe and effective complementary therapy. In conclusion, the study focuses that practicing these specific *Yogasanas* can be an effective method in managing cervical spondylosis.

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REFERENCES

- [1] Shrivastav Ruchi, Prasad Rajendra, management of cervical spondylosis through exercise and asanas. Online International Interdisciplinary Research Journal, ISSN 2249-9598, Volume-VII, Issue- I, 2017.
- [2] Elenberg MR, et.al, Cervical radiculopathy Arch Phys Med Rehabil 1994; 75(3):342-52.
- [3] Linda J and Vorvick MD, 2009, Cervical spondylosis [online], ADAM Health Illustrated Encyclopedia.
- [4] Allan I Binder, Cervical Spondylosis and Neck Pain, British Medical Journal, 2007, 10; 334(7592): 527-31.
- [5] Davidson's (1991). Principles and Practice of Medicine, Longman Group (FE) Ltd, Hong Kong, pp 891-892. ISBN: 0-443-04482-1
- [6] Balyogi Ananda Bhavanani, yoga and cervical spondylosis; 2010
- [7] Effect of yogasana on cervical spondylosis international archives of integrated medicine vol.2, issue7, july 2015
- [8] Lisa A. Ferrara; The Biomechanics of Cervical Spondylosis; Hindawi publishing Corporation Advanced in Orthopedics; Vol. 2012
- [9] R. Alagappan (2014). Manual of Practical Medicine, Jaypee Brothers Medical Publisher (P) Ltd, India, pp 721-722.
- [10] Shih-Yi Lin et.al, Association of Depression and Cervical Spondylosis: A Nationwide Retrospective Propensity Score-Matched Cohort Study, J Clin Med. 2018 Nov; 7(11): 387.
- [11] Ambikananda Saraswati, Swami. Back pain. In Swami Ambikananda, Healing Yoga: A Guide to Integrating the Chakras with Your Yoga Practice. New York: Marlowe & Co., 2001, pp. 132-133.
- [12] Anandamitra Acarya, Avadhutika. The spine. In Avadhutika Anandamitra Acarya, Yoga for Health. 2d ed. Paco, Manila, Philippines: Ananda Marga Publications. 1990, pp. 22-27.

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- [13] Mantu Jain *et.al.* Effect of selected group of asana when used as an adjunct in management of cervical spondylosis of mild to moderate severity: An observational study, *Journal of Ayurveda and Integrative Medicine*, Volume 12, Issue 2, April–June 2021, Pages 351-355.
- [14] Dr. Bijaya Bhattacharya, Yoga for Cervical Spondylosis, *International Journal of Scientific Research*, Volume-8, Issue-9, September - 2019
- [15] <http://www.yogamdniy.nic.in>
- [16] Aditi Singhal, A comparative clinical study on the therapeutic effect of selected yogasana and anu taila nasya for manyastambha (cervical spondylosis) in the elderly population, volume – 10, issue – 7, July – 2020.