

## CONCEPTUAL STUDY OF YOGASANAS AND SHATKRIYA IN THE MANAGEMENT OF OSTEOARTHRITIS (O.A.) OF KNEE JOINT

Mushraf R. Sayyad

Published online: 16 November, 2016

© International Ayurvedic Medical Journal, India 2016

### ABSTRACT

Osteoarthritis (O.A.) is a condition that affects joints causing pain, stiffness and restricted movements. It is the commonest form of joint disease and the knee joint is most commonly affected. The main symptoms of O.A. knee are pain and sometimes stiffness. Pain becomes intense following movements of knee joints specially going up and down stairs. There is no permanent cure for arthritis as yet, but we can reduce the symptoms. Painkillers, anti-inflammatory creams, gels, weight reducing measures are some of the ways tried for temporary relief. As per Ayurveda, vitiated *Vata* and *Rakta* settles in *Asthivaha Srotasa* to produce painful and swollen knees, called *kroshtukasheersha*. Exercising the knee joint is one of the ways to reduce the symptoms of O.A. knee. The article reviews the efficacy of *yogasanas* and *shatkriya* for relieving symptoms of O.A. knee.

**Keywords:** osteoarthritis, *yogasanas*, *shatkriya*, painkillers, pain.

### INTRODUCTION

Osteoarthritis (O.A.) is a disease of old age, with threefold increase in prevalence among elderly when compared to younger counterpart. O.A. of knee joint contributes to nearly 80% of total osteoarthritis burden. Articular surfaces of the joints become damaged so the joint becomes stiff and doesn't move as smoothly as it should. The condition is sometimes called as arthrosis, osteoarthrosis. In osteoarthritis, cartilage covering of bone ends become thin and rough. The bone under the cartilage reacts by growing thicker and broader, to repair the damage. This is spur formation called osteophytes.

Synovium becomes swollen and produce more fluid, causing effusion of knee joint. Capsule and ligaments get thickened in the try to stabilize the joint. O.A. may turn into complications with the deposition of calcium crystals called calcification of joint. In Ayurveda, *kroshtukasheersha*<sup>1</sup> is the disorder featured by painful and swollen knees.

A popular line of treatment include use of anti-inflammatory, analgesics, hot water fomentation, local pain killing creams and gels, calcium and glucosamine supplements, steroids and hyaluronic acid injections and some weight managing protocols. Drugs have side effects. Also patient can't afford costly medicines. Drug reactions and other systemic diseases make the prognosis poorer.

"*Asanas*" literally mean stretches and postures of the body with some disciplines described by ancient Ayurvedic authors, nowadays proved to be benefi-

---

Mushraf R. Sayyad  
Reader, Dept. of Kriya Sharir, Annasaheb Dange Ayurved  
Medical College, Ashta,  
Sangli, Maharashtra, India  
**E-mail:** mushraf\_sayad@rediffmail.com

---

cial for physical and mental health. *Acharya Swatmarama* described benefits of *asanas*<sup>2</sup> viz. they give steadiness, health and lightness of the body. *Yogasanas*, to reduce swelling, to increase the weight bearing capacity of knee joint, to stabilize it, are helpful regarding the osteoarthritis of knee joint. *Yogasana* and exercise both are part of the process of the development of good physical health by stretching the muscles. Without it the muscles waste, the bones become weak, the capacity to absorb oxygen decreases and ability to meet the physical demands of sudden activity is lost. The science of *Hatha* described by *Swami Swatmarama* is a sanctuary for those suffering every type of pain<sup>3</sup>. He described *shatkriya*<sup>4</sup> also known as *shatkarma* which are six purificatory cleansing procedures done by yoga performers. They are *Dhauti, Basti, Nethi, Trataka, Nouli* and *Kapalabhati*. These *yogikkriyas*<sup>5</sup> cleanse the internal organs, removes the waste material which is not expelled normally and creates harmony between mental and physical health.

#### AIMS AND OBJECTIVES:

To study *yogasanas* and *shatkriya* conceptually for the management of osteoarthritis of knee joint.

#### MATERIAL AND METHODS:

Classical texts of *Ayurveda* and modern texts including digital media, internet, E-books regarding the subjects were used as source material in the study.

#### Causes of osteoarthritis of knee joint:

Following factors increase the risk of O.A. Knee. But combination of these factors is often a cause to develop O.A. knee.

- 1) **Age:** Late 40s and onwards is the commonest affected age group<sup>6</sup>. It is yet not understood why O.A. is more common in older people, but it may be due to factors like weakening of muscles and slow healing capacities of the body.
- 2) **Gender:** O.A. knee is twice as common in women as in men. It is often associated with arthritis of the joints of fingers in women.
- 3) **Obesity:** It is an important factor in causing O.A. knee. It worsens and complicates the disease.

- 4) **Joint injury:** Hard and strenuous physical activities can increase the risk. Injuries of knees often lead to O.A. knee. Torned menisci or ligaments in athletes are the common cause to develop the O.A. knee.
- 5) **Genetic factors:** It is also an important risk factor. If parents, sisters, brothers have O.A. there is a greater risk of development of O.A.
- 6) **Other diseases:** R.A. (Rheumatoid Arthritis), gout in youngsters may cause O.A. knee.

#### Symptoms of O.A. knee:

- Pain
- Stiffness
- Crepitus sound during movement
- Swelling
- Locking of knee joint on putting weight on it

Main symptoms include pain and stiffness. Pain gets worsened during movements and relieved after rest. Stiffness commonly occurs in morning and walking relieves it. Creaking or crunching sounds appear during movements in severe O.A. knee. Knee becomes swollen due to osteophytes or collection of extra fluid in the joint.

#### Diagnosis of O.A. knee:

- 1) Blood investigations: No blood test rules out O.A. knee, yet routine blood investigations are carried out by the clinician to rule out other diseases.
- 2) X-rays: Spurs of the articulating bones can be seen in digital X-rays. X-rays also may reveal osteophytes, calcium deposits within joint. X-rays are not good indicators to evaluate the severity of symptoms.
- 3) M.R.I.: Magnetic Resonance Imaging (M.R.I.) of knee is helpful to assess damage to tendons, muscles, cartilage and changes occurring in bones.

#### *Yogasanas and shatkriyas* as management of O.A. knee:

*Ayurveda* and *yoga* have impact over each other as both the system has got originated from *Vedic* sciences. These both traditional sciences believe in

psycho-somatic-spiritual equilibrium. Like *Ayurveda*, *yoga* also described bio purificatory methods (*panchakarmas* and *shatkriyas*). Like *vamana*, person drinks saline water and induces vomiting<sup>7</sup>, one of the *shatkarmas* called *Vamana Dhauti*. Likewise, *Basthi* of the *shatkriya* mimics the *Basti* of *panchakarmas* of *Ayurveda*. *Shatkriyas* are the preparative cleansing procedures of *yoga* which should be priority done before the commencement of *asanas*. Straightening exercise improves the strength and tone of the muscles that control the knee joint. O.A. knee weakens the quadriceps muscles so regular exercise of the *yogasanas* and *shatkriya* help to stabilize and protect the joint. Regular aerobic exercise e.g. *Kapalabhati* and *Pranayama* helps for a better sleep and can reduce pain by stimulating pain-relieving hormones called endorphins<sup>8</sup>. *Kapalabhati* is one of the *shatkriyas*. One should perform the flopping of abdomen by active exhalation and passive inhalation. It corrects digestion<sup>9</sup>, provides massage to abdominal organs, may act on *Agni* and *Vata* and alleviates *Vata* disorders. *Nouli* is an abdominal procedure in which isolated contraction and rolling manipulation of the anterior abdominal, rectal muscles are accomplished<sup>10</sup>. Mudras are also described in *Samhitas* of *yoga* which are again the bodily postures disciplined and governed by rules of *yoga*. It is said that by just practicing *mudras* the *yogi* is freed from all the diseases.<sup>11</sup> *Yoga* exercises which seems helpful in the O.A. knee joint are described below:

- 1) *Mahamudra*<sup>12</sup>: Firmly pressing anus on left ankle, extending right foot, holding the toes with the hands, contracting the throat and looking between the eyebrows at the same time. Inhaling air repeatedly during the pose is called *mahamudra*. By mastering *mahamudra*, one can alleviate all diseases.
- 2) *Pashchimatanasana*<sup>13</sup>: Both legs are stretched on the ground. Both toes are grasped with hands. Bring the forehead towards knees to touch them and rest the forehead on the knees. This is *pashchimatanasana*. It flattens the belly, stimulates *Agni* and reverses the flow of breathe.

- 3) *Pavana muktasana*: as the name suggests *pavana*-air, *mukta*-release, *asana*-pose it regulate and release *vayu* (*Vata*) from the whole body especially gastrointestinal tract and joints<sup>14</sup>. Lying on your back with legs and arms extended, with exhalation, draw both your knees to your chest and grasp your hands around your knees. Release left leg by slowly extending it. Hold this pose for 30 to 60 sec. Draw back your left knee towards chest and clasp around both knees again. While holding your left knee release your right leg and extend it along the floor. Hold this phase for same duration. Finally, draw both knees to your chest. A good stretch is experienced around the knee which helps to reduce swelling and effusion. *Pavana muktasana* increases the mobility of joint stimulate circulation of synovial fluid, its secretion and absorption<sup>15</sup>.
- 4) *Urdhwaprasaritapadasana*<sup>16</sup>: Lie in supine position with both arms overhead. Exhale, and try both legs to swing them up to vertical. Hold the pose for at least 5 to 10 sec. Exhale and lower the legs down about a third of the way, until the lower back starts to come up of the floor. Hold the pose. Again exhale and lower the legs to just a few inches off the floor. Hold the pose. Lower the legs completely to the floor. This is the best *asana* to lose belly fat with increasing the power of the *psoas* muscles.
- 5) *Tadasana*: It makes you understand the exact weight to be given on knees. Both upper extremities stretched upwards overhead which reduce weight of the body on the knees. It stabilizes and strengthens knee joints. In starting phase it should be done for 30-40 sec. Studies indicates better improvements in walking pain<sup>17</sup>, knee flexion, tenderness, swelling, crepitus and disability of O.A. knee patients with regular exercise of *Tadasana*.
- 6) *Utthita-hasta-padangushthasana*<sup>18</sup>: It is also called as *Vriksasana*. Stand in upright position with arms overhead. Exhale and raise the right leg with fully extended position towards the head. Hold the pose as much as you can. Then inhale and bring back the raised leg to the normal position. Repeat the same process for left

leg. It stretches the muscles of thigh and pelvis. It empowers the muscles of calf. It elevates sacrum so that weight on knees gets reduced.

## DISCUSSION

The article covers a conceptual review of yoga therapy for O.A. knee joint which can reduce the pain, swelling and stiffness of knee joint. Various *mudras*, *asanas*, *shatkriyas* has got described in the ancient yoga literature viz. *Hatha Yoga Pradipika*, *Patanjal Yoga Sutra*, *Gheranda Samhita*. Only the exercises and poses in which a direct stretch on knee joint is observed are described above for the sake of convenience. The simplicity of the yoga exercise should be considered as the disease is of senile age. The preparative *karmas* and the actual *yoga* should be taught to the patient slowly and perfection in each step must be expected from the patient. During the movements pain at knee joints gets intensified. As the disease is of senile age *yoga* should be performed after getting trained from yoga experts. *Asanas* which decrease the pain, increase the power and strength of knees are helpful. *Asanas* gives good results if regularly and timely done.

## CONCLUSION

O.A. knee is a disorder of knee joint having pain, stiffness and restricted movements altering the lifestyle of the patient. Adopting yoga therapy i.e. a set of *yogasanas* and *shatkriya* for symptomatic management, accepting balanced diet for weight management and use of traditional medicines, if necessary prove as an effective management of O.A. knee.

## REFERENCES

1. *Madhavkara/MadhavanidanaE-book2003 /vatavyadhinidanam-Verse58/ Maharshi University of Management/ Vedic Literature Collection*
2. *Swatmarama swami/The Hatha Yoga Pradipika/English translation by Brian Dana Akers/Chapter1, Verse17/Page No.6/Woodstock, NY/Yoga Vidya.com,2002*
3. *Swatmaramaswami/The Hatha Yoga Pradipika/English translation by Brian Dana Akers/Chapter1, Verse9/Page no.3/Woodstock, NY/Yoga Vidya.com,2002*
4. *Goswami Pralhad Giri/ Gheranda Samhita/ Krishnadas Academy, Varanasi,2001/ Chapter No.1, Verse 12, Page no. 4*
5. *Pancham Sinh /The Hatha Yoga Pradipika English Translation/ Chapter no. 2, page No. 16.4<sup>th</sup> edition, Munshiram Manoharlal publishers PVT. LTD., New Delhi, 1992.*
6. [https://www.arthritisresearchuk.org/media/files/arthritis-information/conditions/2027\\_osteoarthritis-of-the-knee.ashx](https://www.arthritisresearchuk.org/media/files/arthritis-information/conditions/2027_osteoarthritis-of-the-knee.ashx)
7. *Mrs. Sweta Bhat, edited by Goswami Pralhad Giri/ Gheranda Samhita, Krishnadas Academy, Varanasi first edition, 2001, Page No. 12*
8. [https://en.m.wikipedia.org/wiki/pituitary\\_gland](https://en.m.wikipedia.org/wiki/pituitary_gland)
9. *Pancham Sinh /The Hatha Yoga Pradipika English Translation, Chapter no. 2, Page no. 18, 4th edition, Munshiram Manoharlal publishers PVT. LTD., New Delhi, 1992.*
10. *Pancham Sinh /The Hatha Yoga Pradipika English Translation, Chapter no. 2, Page No. 18, 4th edition, Munshiram Manoharlal publishers PVT. LTD., New Delhi, 1992.*
11. *Swatmarama swami/The Hatha Yoga Pradipika/English translation by Brian Dana Akers/Chapter 4, verse1/Page no.72/Woodstock, NY/Yoga Vidya.com,2002*
12. *James Mallison/Shiva samhita/mudras chapter4-verse25, 26, 27, 28, 29/The Original and English translation/YogaVidya.comLLC2004.*
13. *Pashchimatanasana : Swatmarama swami/The Hatha Yoga Pradipika/English translation by Brian Dana Akers/Chapter1, Verse17/page no.6/Woodstock, NY/Yoga Vidya.com,2002*
14. *Alka Gupta, H. H. Awasthi/A Critical Review of Clinical Application of Yogasanas w.r.to Pawanamuktasana/I.A.M.J./1088, vol.2; issue 6; November-december-2014*
15. *Alka Gupta, H. H. Awasthi/A critical Review of Clinical Application of Yogasanas w.r.to Pawanamuktasana/I.A.M.J./1093, vol.2; issue 6; November-december-2014*
16. <http://www.yogaartandscience.com/poses/corep/upppfull/upppfull.html>

17. John Ebnezar, Bali Yogitha / effectiveness of yoga therapy with the therapeutic exercises on walking pain, tenderness, early morning stiffness and disability in osteoarthritis of the knee joint; a comparative study/yoga and physical therapy/2:114,doi:10.4172/2157-7595.1000114  
<http://www.google.co.in/search?hl=en&ie=ISO-8859-1&q=utthita+hasta+padangushthasana+article+pdf>
- 

How to cite this URL: Mushraf R. Sayyad: Conceptual Study Of Yogasanas And Shatkriya In The Management Of Osteoarthritis (O.A.) Of Knee Joint. International Ayurvedic medical Journal {online} 2016 { cited October - November, 2016} Available from: [http://www.iamj.in/posts/images/upload/91\\_95pdf](http://www.iamj.in/posts/images/upload/91_95pdf)