

To assess the effect of Bhujangasana in Katishoola in two wheeler users

Katishool is the most common complaint after common cold throughout the world. As it is affecting all sorts of occupation ranging from heavy manual workers to house wives, there is a great necessity to find an effective and economic mode of treatment method.

Common mode of transport in India for a person of average economic status is use two wheeler automobiles. Due to the worst conditions of roads, people travelling by two wheelers are the most affected ones with Kati Shoola or low back pain.

Bhujangasana is mentioned in yogic texts & this asana may be found useful in katishoola. This asana may be useful in downward movement of apana vayu. Bhujangasana is stretching asana and have been indicated in relieving back pain.

20 patients of Katigraha, attending BVMF's Ayurved Hospital were scrutinized and selected on the basis of inclusion criteria and were asked to follow the trial methods of respective group.

Keywords: Bhujangasana , Katishoola, Asana, Yoga, Two wheeler users, low backache



Timsi Srivastava

Assistant Professor
Swasthavritta,
M.S.M. Institute of ayurveda
Khanpur Kalan, Sonipat,
Haryana

Introduction

Modern and fast life style is dragging most of the people towards a meaningless mechanical life. Almost 8 persons out of 10 suffer from Low Back Ache at least once in their life. About 60% of the Low Back Ache sufferers belong to the age group of 21- 40 years. In other words Low Back Ache strikes the person when they are in the productive stage of their lives. Low Back Ache is a most common musculo-skeletal disorder. The pain affects the lower lumbar spine, lumbo sacral area and sacro-iliac joints. And affected muscles are Psoas major, Erector spinae, Quadratus lumborum and Latismus dorsi. The change in form of transport from ancient to modern era especially in two wheeler user's katishool is now most common complaint. Katishool is a common symptom seen in people using two wheelers due to bad condition of roads and continuous driving etc. The condition of 'Katishoola' is described in the classical texts of Ayurved also as Katigraha and Prushthashoola.

The conventional Ayurvedic treatment is expensive, long term and does not have much of a preventive effect. Yoga is known to have preventive and health promotive effects in addition to its therapeutic benefits.

Asana is a Sanskrit word that literally means a pose or posture. In Pantanjali's yoga Sutras asana means, posture of body which is motionless and comfortable. According to patanjali's yoga Sutra Sthirasukhamasanam, mean the posture should be steady and comfortable. According to yoga shastra, the person gets rid of ruja (pain) by the use of asana. Yoga is now a day used as a tool to relieve stress & strain. In people with complaint of katishoola asana can be advisable. Asana are scientific postural patterns, which are easily practicable. Asana is not a time consuming therapy. Yoga has a great role to prevent and cure many of the so called life style disorders. As a matter of fact Yogasana's have been considered as the most convenient, drug less and inexpensive method of achieving certain desired effects.

Bhujangasana is mentioned in yogic texts & this asana may be found useful in katishoola. This asana may be useful in downward movement of apana vayu. Bhujangasana is stretching asana and have been indicated in relieving back pain.

The Gheranda Samhitta explains Bhujangasana thus:

From the big toe to the navel, lay the body on the ground. Holding the ground with the palms, lift the head just like a cobra.

**Dehagnirvardhate nityam sarvarogavinasanam I
Jagarti bhujagi devi bhujagasanadhanat I I
G.S.2.43 I I**

Gheranda Samhita further says that this Bhujangasana always increase the bodily heat and destroys all diseases. By the practice of this posture the serpent goddess (the kundaalini force) awakes. Hence an attempt is made to study the Bhujangasana in Katishoola.

This study was planned as a non-pharmacological approach for the management of Katishoola and also to observe the efficacy of yoga in its prevention and the regularizing of functions of vertebral column.

The condition of 'Katishoola' is described in the classical texts of Ayurved also as Katigraha and Prushthashoola. The conventional Ayurvedic treatment is expensive, long term and does not have much of a preventive effect. Yoga is known to have preventive and health promotive effects in addition to its therapeutic benefits.

This study was planned as a non-pharmacological approach for the management of Katishoola and also to observe the efficacy of yoga in its prevention and the regularizing of functions of vertebral column.

Aim of Study

1. To assess the effect of Bhujangasana in katishoola in two wheeler users.
2. To study the literary aspects of Bhujangasana.

Hypothesis

1. Null hypothesis – yoga has no effect in Katishoola.
2. Alternative hypothesis – yoga helps in reducing the signs and symptoms of Katishoola, helps in prevention of same.

Source of data

The source of collection of patients will be from the OPD and IPD of BVMF's Ayurved Hospital, Pune.

Study design

It is a clinical study with a pre-test and post-test design in a group, comprising of 20 patients. Patient undergoing any other treatment (internal or external) was discontinued. All 20 patients were taught Bhujangasana as per the procedures mentioned, and were asked to continue the same for a period of 30 days.

The yoga practice consisted of relaxation techniques, asanas and meditation with 15 - 20 minutes duration. The yoga practice was done once in a day.

During the time of acute pain this yoga practice was not followed by the patient.

Patients were advised to follow the practice daily. Improvement was assessed as per the following schedule.

Follow up:

Follow up done periodically for total duration of 2 months.

- | | |
|---------------------------|--|
| 1 st follow up | - On 7 th day |
| 2 nd follow up | - On 15 th day |
| 3 rd follow up | - On 30 th day |
| 4 th follow up | On 60 th day (Post treatment) |

Diagnostic criteria

The diagnosis was established on the basis of the patient's history, symptoms and radiological investigation.

Inclusion criteria:

1. Diagnosed cases of Katishoola were included.
2. Individuals between age group of 30 to 50 years were included in the study.
3. Both male & female cases were included.
4. Two wheeler users, travelling around 20-30 Km/day, suffering from katishoola for more than 2-3 months were included.

Exclusion criteria:

1. Patients of Katishoola those who are contraindicated for Bhujangasana were excluded from the study.
2. Secondary cases of Katishoola were excluded.
3. Individuals having T.B. of spine, Bamboo spine, ankylosing spondylolities, accidental cases etc were excluded.
4. Individuals suffering from any other systemic disease were excluded.

Assessment Criteria

The findings were subjected to analysis before and after Asana's in each group and between the groups.

Pain being a dominant symptom, the patient's pain was assessed using 'The Pain Assessment Scale'. This helped in doing subjective assessment of pain.

Self-formulated scoring scales were used to assess the rest of the symptoms.

- | | |
|---|-----|
| 1. Stambha (stiffness) | |
| a) No Stambha | _ 0 |
| b) Some times for 5- 10 minutes | _ 1 |
| c) Daily for 10-30 minutes | _ 2 |
| d) Daily for 30-60 minutes | _ 3 |
| e) Daily for more than 1 hour | _ 4 |
| 2. Toda (pricking sensation) | |
| a) No Toda | _ 0 |
| b) Occasional pricking sensation | _ 1 |
| c) Mild pricking sensation | _ 2 |
| d) Moderate pricking sensation | _ 3 |
| e) Severe pricking sensation | _ 4 |
| 3. Ruk (pain) | |
| a) No Ruk | _ 0 |
| b) Painful walk without limping | _ 1 |
| c) Painful walk with limping but
Without support | _ 2 |
| d) Painful can walk only with support | _ 3 |
| e) Painful unable to walk | _ 4 |
| 4. Gaurav | |
| a) No Gaurava | _ 0 |
| b) Mild Gaurava | _ 1 |
| c) Moderate Gaurava | _ 2 |
| d) Severe Gaurava | _ 3 |
| e) Very severe gaurava | _ 4 |
| 5. Graha (Restricted movements at spine) | |
| Flexion | |
| Ground – | _ 0 |
| 10cms from the ground - | _ 1 |
| 20cms from the ground - | _ 2 |

Extension	
Normal range 20° from the medial line -	_ 0
10° from the medial line -	_ 1
Pain during movement -	_ 2
Left lateral movement	
40° from the medial line -	_ 0
20° from the medial line -	_ 1
Pain during movement -	_ 2
Right lateral movement	
40° from the medial line -	_ 0
20° from the medial line -	_ 1
Pain during movement -	_ 2
Rotating movement in all not much relief	
40° from the medial line -	_ 0
20° from the medial line -	_ 1
Pain during movement -	_ 2

Laboratory investigations (if necessary)

1. Blood – haemoglobin, erythrocytic sedimentation rate, total W.B.C count, differential leukocyte count.
2. Urine – microscopic, sugar, albumin.
3. Radiological investigations

Yoga Module Adopted in The Study

S.No	Practice Type	Practice Name	Duration (Minutes)
1.	Opening Prayer		1
2.	Asana	Sukshma Vyayama	2
		Bhujangasana	5
3	Meditation	Nada anusandhana	2
4	Closing Prayer		1

Timing of the Asana's was managed according to the group, patient's response and its respective asana.

Tools

Test used for analysis:

Test used for testing effectiveness of the given three treatments on patients: -

Let X: Observations before application of the treatment

Y: Observations after application of the treatment

$$D = X - Y$$

Null Hypothesis is :

$$H_0 : \mu_d = 0$$

Alternative Hypothesis is :

$$H_1 : \mu_d > 0$$

$$t_{cal} = \frac{d}{\sqrt{\frac{s^2}{n}}} \rightarrow t_{n-1}$$

Reject Ho if $|t_{cal}| \geq t_{n-1, \alpha/2}$ accept otherwise

If Ho is rejected then we accept $\mu_d > 0$

Results and Discussion

- **Age** - In the present study maximum number of patients observed in age group of 30-40 i.e. from to elder age. This shows that due to continuous use of two wheelers there is manifestation of Katishoola more in this age group.

- **Sex** - Study reveals that most affected patients to be Males. The reason may be due to the exposure of males to the cause concerned with the present study i.e. use of two wheeler automobiles.
 - **Working Hours** - Maximum number of patients used to travel on two wheeler automobiles for approximately around 20-30 kms. /day which included jerky movements, walking, continuous vibration etc.
 - **Nidana** - Vihara, ativyayama, physiological stress and strain were observed in almost all the patients. According to Ayurveda vitiation of vata dosha is considered to be the causative factor for pain (Ruja, Graha, and Shoola). Assessment of the improvement was done based on following factors. They are Stambha, Toda, Gaurav, Kati Graha, flexion, extension, right lateral movement; left lateral movement and rotation of spine. The observations of all the above criteria's were recorded and subjected to statistical analysis and results were drawn accordingly.
 - **Ruja (pain)** - Among 20 cases maximum cases of Kati Shoola had a chronic history of pain since 3-4 months, which was mostly neglected due to work stress or less severity. Most common complaint back pain was assessed by grading given on the basis of severity. Use of Asana'a helped in relaxation of back structures there by helped in relieving the pain.
 - **Stambha** - showed 62 % of relief. Use of Asana simultaneously helped in over all massaging of back muscles, which helped in relieving the stiffness.
 - **Toda** - showed 48 % of relief. Mild to moderate relief was observed in all the patients for the lakshan of toda (pricking sensation)
 - **Gaurav** - showed 36 % of relief. No much relief was observed in all the groups for the laxana of gaurav, reason may be due to the feeling of tiredness due to work stress, lack of bed rest and due to chronicity of the disease. Psychological factor for the long standing feeling of pain and heaviness in back may also be supposed to be one of the reasons.
 - **Flexion** - Most commonly affected movement in back pain patients. Showed 46% of relief.
 - **Extension** - showed 53 % of relief.
 - **Left Lateral movement** - showed 61 % of relief.
 - **Right Lateral movement** - showed 66 % of relief.
 - **Rotatory movement of spine** - showed 67 % of relief.
- Conclusion:**
1. Occupation, involving travel specially the mode of transport being use of two wheeler plays a prime role in the causation of Katishoola.
 2. Almost 8 persons out of 10 suffer from Low Back Ache at least once in their life. About 60% of the Low Back Ache sufferers belong to the age group of 21- 40 years
 3. Graha (spasm) associated with restricted spinal movements and Pain in lower back is the main clinical features that disturbs the routines of the patient and brings them to the physician.

Asian Resonance

4. Yoga has a great role to prevent and cure many of the so called life style disorders. As a matter of fact Yogasana's have been considered as the most convenient, drug less and inexpensive method of achieving certain desired effects.
5. Bhujangasana is an important Asana specifically indicated in Katishoola (Low Back Pain)
6. In the present study use of Asana i.e. use of Bhujangasana showed mild to moderate relief in signs and symptoms of kati Shoola.
7. Post treatment follow ups showed marked relief and reduction of recurrence in the episodes of kati Shoola in two wheeler users.
8. Yoga practice brings about a balanced equilibrium in the functioning of the two components of the peripheral autonomic system i.e. the sympathetic and parasympathetic.
9. These Asanas can be practiced without causing any undue disturbances in their daily routine of life by anybody irrespective of age, sex, place, climate or any other such factor.
10. Yoga definitely plays an important role in prevention of Kati Shoola and associated symptoms without any side effects.

Mode of Action:

The practice of asanas involves stretching and moving the body into various positions. With practice, the body can be made to remain in a specific position for a longer period of time, comfortably.

Backward bending asana creates a negative pressure in the abdomen and pelvis, helping neuro-circulatory toning of all the related organs. They also massage the abdomen and pelvic organs by stretching the muscles in this area, especially the rectum abdominal.

Yoga is a system of self healing. According to the yogic philosophy, diseases are the result of faulty ways of living, bad habits lack of proper knowledge of things related to an individual's life and improper food and changes in modern lifestyle. These factors disturb the equilibrium within the body. The diseases are thus the resultant state of a short or prolonged malfunctioning of the body system.

Therapeutic yoga and its importance

Modern medical system has proved itself most effective in saving man from the fatal contagious and infectious diseases. However, the rapidly increasing incidence of stress related ailments is posing a great challenge to the modern medical system. Yoga is not just a methodical system which helps man to attain spiritual growth, but has therapeutic applications also.

Reference

1. Charaka Samhita- Ayurveddipika: Chakrapanidatta, Chaukhamba Prakashan, Varanasi.2000.
2. Charaka Samhita- Savimarsha Vidyotini Part I and II : Rajeshwardatta Shastri, Chaukhamba Prakashan, Varanasi, 1998.
3. Sushruta Samhita – Ayurved Tattawa Sandipika Hindi Vyakhya : Dr. Ambikadutta Sharstri, Chaukhamba Prakashan, Varanasi, 2001.

4. Ashtanga Hridya- Commentaries by Arundatta and Hemadri : Annotated by Vd. Anny Moreshwar Kunte, Chaukhamba Prakashan, Varanasi, 1997
5. Bhel Samhita : Acharya Bhela, Chaukhamba Prakashan, Varanasi.
6. Ashtanga Sangraha- Acharya Vagbhata, Shrimad Aatreya Prakashan Pune.
7. Madhava Nidanam : Acharya Madhavkar, Chaukhamba Sanskrit Series, Varanasi.
8. Sharangadhara Samhita- Dipika Commentary : Aadhamalla, Chukhamba Prakashan, Varanasi.
9. Kashyapa Samhita: Acharya Kashyapa, Nirnay Sagar Press, Mumbai, 6th edition.
10. Amarkosha:Amarasimha, Edited by Pandit Shivadatta, Nirnay Sagar Pres Mumbai, 6TH Edition.
11. Shabda Kalpa Druma : Chukhamba Sanskrit Series, Varanasi, 1961.
12. Kayachikitsa (Hindi): Vd. S. C. Dhyani Ayurvedic and Tibbi Academy, Lucknow, U.P. 1991.
13. Vyadhinishchaya : Vd. A. D. Athwale, Shriradha Damodar Pratishthan, Pune.
14. Harrison's Principles of Internal Medicine, 16thEdition: Mcgraw- Hill Book Company, London.
15. Davidson's Principles and Practice of Medicine: Edited by C.R.W.Edwards, I.A.D. Bochier, C. haslet, E.R.Chivlers.
16. Ayurved & modern Medicine by R.D. Lele
17. Dr. H.R. Nagendra & R. Nagaratna, Integrated Approach to Yoga therapy for Postitive Health,1st Edition, 2001.Swami Vivekananda Yoga prakashana, Bangalore,
18. Patanjali Yoga Darshan, Krishnaji Keshav Kolhatkar, 7th edition Shi Samartha Sadan, Girgaon, Mumbai.
19. The Gheranda Samhita, 3rd Edition English translation by Rai Bahadur Srisa Chandra Vasu, Munshiram Manoharlal Publishers Pvt. Ltd., New Delhi.1980
20. The Hatha Yoga Pradipika, 4th Edition English translation by Panoram Singh, Manoharlal Publishers Pvt. Ltd., New Delhi.1992.