

## A Case Study On Dynamic Correction Of Postural Kyphosis With Yogasanas And Medicated Herbal Oil Pinda Thylam

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### Abstract

Human posture has been an important social and physical concern throughout the history and affects a person's identity and dignity. A wrong posture such as slouching and repetitive movement can cause deterioration of health. Hence it requires a conscious effort to maintain good posture. Due to lack of appropriate ergonomic design in workspaces, the repetitive activity of overhead movements in activities or daily living, sitting at a computer desk to complete daily tasks postural spinal deformities such as Kyphosis have become a common issue. This condition can cause pain in the shoulders and neck, but the largest issue is its undesired aesthetic. The present case demonstrated an early diagnosis of postural kyphosis and presented with cervical pain, tenderness, low back pain with mild visible hump. She was advised specific *yogasanas* such as *Vajrasanam*, *Tadasanam* and *Majarisanam* for a period of 30 days. The noteworthy fact of this study is that the subject was not prescribed any internal medicines and was advised a medicated herbal oil commonly known as Pinda thylam externally over painful areas. After 30 days, the subject reported drastic reduction in cervical pain and stiffness, tenderness and reduction in mild hump present at the low back area.

**Key words:** Kyphosis, Yogasanas, Siddha, Back pain, Postural abnormalities

### Introduction

People are becoming more sedentary in recent days with changes in diet and posture. Due to the growth of technology, most people spend the majority of their days and nights looking at computer or phone screen and also follow wrong posture while reading or writing. In doing so, shoulders and neck muscles become accustomed to this forward-leaning posture, causing it to be a constant state of being overstrained causing spinal malpositions such as slouching or kyphosis. The term kyphosis is used to describe the spinal curve that results in an abnormally rounded back. Kyphosis can occur at any age due to trauma, developmental anomalies, degenerative disc disease, inflammatory diseases, and infectious diseases. Kyphosis may also develop due to muscular and neuromuscular diseases and is divided into low degree (such as postural roundback) and high degree (angular gibbus deformity, congenital kyphosis, Pott disease and best known form which is Scheuermann)<sup>1</sup>. While the shape of the vertebral bodies and intervertebral discs contributes to a small amount of anterior curvature of the thoracic spine that is normal, a kyphosis angle greater than 40°, which is the 95th percentile of normal for young adults, is defined as hyperkyphosis. An increase in the angle of kyphosis decreases the physical performance and quality of life making early intervention for hyperkyphosis a main concern<sup>2</sup>. The severity of deformity determines the mode of treatment. Early treatment may be limited to observation and exercises, whereas patients who have kyphosis of up to 75 degrees and how have growth remaining may benefit from bracing. Currently surgical correction is reserved for severe cases that are symptomatic and refractory to conservative management<sup>3</sup>. Yoga is essentially spiritual discipline based on extremely subtle science which focuses on bringing harmony between mind and the body.

***"Anjanam Pondrudak Iiarum Andhiyil***

**Vanjaga Vadham Arum Mathiyathil**

**Senjiru Kalayil Seithidil Pithanum**

**Nanjara Chonnom Naraithirai Nasamae" –Thirumandhiram.**

According to Thirumoolar practising yoga at evening time (*Andhi*) cures *kabham* disease (*Iyam*), at afternoon (*Mathiyathil*) cures *Vadham* disease, at early morning (*Athikalai*) cures *Pitham* disease. By doing in this manner it helps to attain the state of *Kaya-Karpam*, the science of rejuvenation. It was well explained by *Thirumoolar* in his text *Thirumandhiram*. It deals with the prevention of *Narai* (whitening of hairs), *Thirai* (shrinkening of skin), *Muupu* (aging), *Pini* (disease), *Sakkadu* (death).<sup>4</sup>

**CASE HISTORY**

A 22 year old female patient presented with complaints of shoulder stiffness, pain while standing erect, mild bulge on the back of neck since 6 months. She is a student, unmarried with no other underlying illness. Family history did not reveal any related comorbidities. History taking revealed that she use to spend long hours of leaning forward and studying after which she developed pain in the back and shoulders. On physical examination loss of cervical curvature is seen and tenderness-positive in spine muscles.

**RESULTS AND DISCUSSION**

Being a student, the present case had developed postural kyphosis due to incorrect posture. According to Dolphens et al., 2012, Incorrect posture refers to abnormal body state in which the body cannot maintain a stable and normal functions of tissues and organs in upright state.<sup>5</sup> A bad body posture in childhood is often progressed into adulthood<sup>6</sup>. Posture has been shown to have several effects on body's ability to function at its maximum potential, especially pertaining to oxygen flow. A study examining the position change from standing to laying proved that there was a twenty-five percent less cardiac output throughout the body when laying down.<sup>7</sup> Another study focused on the pressure of the pulmonary capillary depending on head tilt; a forward head tilt was heavily cautioned as it elevated levels of pulmonary capillary pressure. This leads to hazardous levels of heart complications.<sup>8</sup> In answer to this, Yoga is an ideal group exercise to improve postural control and mobility. The physical practice of yoga is called *asanam* – physical postures linked with breath and movement to build internal heat, which cleanses the internal organs and glands, oxygenating blood and joints and clearing the mind.<sup>9</sup> Hence the patient was advised and properly guided to practice *Vajrasanam*, *Tadasanam* and *Majarisanam* for a period of 30 days. After the treatment period, the study subject reported drastic reduction in cervical pain and stiffness, tenderness and reduction in mild hump present at the low back area which was manifested through alteration in chest circumference from 38.5 (before treatment ) to 39.5 (after treatment). The VAS pain scale was measured and reduced from score 7 (severe pain) to score 3 (No pain). Interestingly, the subject was not prescribed any internal medicine and was given external medicated oil *Pinda thylam* only. *Pinda thailam* is one of the common herbal medicated oil given in all Siddha outpatient departments. It is used as topical antiinflammatory agent and contains aqueous extract of roots of *Hemidesmus indicus* and *Rubia cordifolia* as important active constituents.<sup>10</sup>

*Vajrasanam* improves stability and tone of knee joint, skeletal muscles of thigh, leg, back. Its regular practice it strengthens iliopsoas, erector spinae, quadrates lumborum and adductors and calf muscles of leg. So it is clinically recommended in weakening of muscles. It strengthens the Iliacus and psoas muscles and gradually lengthen the adductors with prolonged adductor stretches. Longus

colli and Scalene muscles support the posture and increase the lift in head and neck region. It is helpful to the individuals suffering from sciatica and some lower back problems, muscle ache of lower extremities.<sup>11</sup>

*Tadasanam* or Mountain like Pose is a basic standing pose. It involves all the muscles of the body and is done for improving body posture. *Tadasanam* increases strength, power, and mobility. It tones every muscle in the body and is effective in toning the back muscles. It tones abdomen and buttocks muscles. It also encourages healthy digestion and elimination of waste products.<sup>12</sup>

*Marjariasanam* targets the upper back area, relieving tension in the upper-back muscles and improves posture. It is a Cat like Pose to stretch and strengthen the para-vertebral muscles and known as one of the best yoga poses for treating kyphosis. It increases the mobility of the vertebral column and relieves tension of cervical, thoracic, and lumbar spine. It strengthens and tones the muscles of arms and abdomen. It cures kyphosis and also increases the length of pectorals and provides strength to the thoracic region muscles.<sup>13</sup>

The limitation of this study includes a lack of specific prognostic feature and has observed only verbal statements of the subject in pain reduction and visible reduction of kyphosis hence it needs to be standardized using specific tools of measurement.

## CONCLUSION

The findings of the fore mentioned case study enables to draw concrete conclusions the healing power of yoga postures. It demonstrates the enhancement of muscular strength and body flexibility in disabilities of postural kyphosis. This holistic practice of traditional medicine aids overall well-being and quality of life. In future, more large scale clinical trials may be necessary for other spinal postural disabilities to validate the efficacy of yoga in life style disorders.

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