



ROLE OF YOGA IN PRIMARY DYSMENORRHOEA

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ABSTRACT

Primary dysmenorrhoea is the most common gynecologic disorder among female adolescents with a prevalence of 60 % - 93 %. Several studies have shown that adolescent with primary dysmenorrhoea report that it effects their academic performance, social and sports activities and is cause for school absenteeism. Anxiety, Depression, inactivity, nulliparity these are the conditions associated with the primary dysmenorrhoea. Symptomatic treatment is given but it has the adverse effect on the body. To combat such type of problems yoga provides a new approach for the treatment. Yoga does not cause any side effect. It regulates the endocrine system and relieves anxiety. It helps in decreasing the level of prostaglandins and inflammatory mediators responsible for pain.

Keywords: Primary dysmenorrhoea, Anxiety, Adolescents, Yoga, Nulliparity

INTRODUCTION

Menstrual disorder is very common problem in late adolescents. 75 % of girls experience some problems associated with menstruation.¹ Primary dysmenorrhoea is most common gynecologic disorder among adolescent with prevalence of 60 to 93 %. Primary dysmenorrhoea is a condition which is associated with painful menstruation in women with normal pelvic anatomy.² It usually begins during adolescence and affected female experience sharp pain, intermittent spasm usually concentrate on supra pubic region. Primary dysmenorrhoea appears within 2 years of menarche. The mother or sister may be dysmenorrhoeic. The mechanism of initiation of pain in primary dysmenorrhoea is not exactly known. It can be explained on the basis of two facts i.e. release of prostaglandin (PGF₂ Alfa) from the endometrium and uterine hypoxia³. Release of prostaglandins and other inflammatory mediators in the uterus are thought to play a major role in primary dysmenorrhoea because they are responsible for uterine contractions. When the uterine muscles contract, they constrict the blood supply to the tissue of the endometrium. These uterine contractions continue as they squeeze the old, dead endometrial tissue through the cervix and the vagina. These contractions and temporary oxygen deprivation to nearby tissues are responsible for the pain or cramps experienced during menstruation. Several studies have shown that adolescents with primary dysmenorrhoea report that it effects their academic performance, social and sports activities and is a cause for school absenteeism⁴; so symptomatic treatment is given to treat this problem. This treatment has positive as well as negative effect on the body. To avoid such side effects there is need to explore the other approach to treat this problem. Primary dysmenorrhoea may be treated with the help of yoga. Asana and Pranayama play important role in maintenance of positive health. Asana are the posture through which the body get relaxed, strengthened and become more flexible. Asana and pranayama having the calming effect on the nervous system and also exert an important effect on endocrine system to help in regulating the hormones

Risk Factors

These are age < 20 years, nulliparity, heavy menstrual flow, smoking, physical inactivity, disruption of social networks, depression and anxiety.⁵

Signs and Symptoms

The main symptom of dysmenorrhoea is pain concentrated in the lower abdomen, in the umbilical region or the supra pubic region of the abdomen. It is also commonly felt in the right or left abdomen. It may radiate to the thighs and lower back. Symptoms often co-occurring with menstrual pain include nausea and vomiting, diarrhea or constipation, headache, dizziness, disorientation, hypersensitivity to sound, light, smell and touch, fainting, and fatigue. Symptoms of dysmenorrhoea often begin immediately following ovulation and can last until the end of menstruation. This is because dysmenorrhoea is often associated with changes in hormonal levels in the body that occur with ovulation.

Diagnosis

The diagnosis of dysmenorrhoea is usually made simply on a medical history of menstrual pain. However; there is no universally accepted gold standard technique for quantifying the severity of menstrual pains. Yet, there are quantification models, called menstrual symptomatic, that can be used to estimate the severity of menstrual pains as well as correlate them with pain in other parts of the body, menstrual bleeding and degree of interference with daily activities.

Intervention

Hypothalamus –pituitary – ovarian axis; which controls the menstrual rhythm; hypothalamus is also connected with cerebrum and limbic system which is the site for emotions and to pituitary gland by portal circulation. Stressful events, anxiety, depression evoke the emotional response which disturbs the HPO axis. Psychological stressors can directly provoke the transient increase in inflammatory mediators which is responsible for the pain occur during menstruation.⁴ Treatment should be done according to the cause of the disease but there is not exact any pathology in case of primary dysmenorrhoea. There are two main factors i.e.

sedentary life style and family history of dysmenorrhoea which may be responsible for primary dysmenorrhoea. Yoga can play important role in management of such type of disorders. Because yoga is not only the physical postures, breathing exercises. It is comprehensive and precisely live tuned process because of its positive effects on physical as well as mental health. It has been also seen that who are very active having lower level of inflammatory biomarkers.⁵ Activity of the body depends upon the physical and mental condition of a person. Primary dysmenorrhoea is a condition which occurs due to less activity and decrease in activity is also the result of this disease due to pain which hamper the daily routine of the patient. Yoga therapy provides good approach to treat primary dysmenorrhoea. There are group of asanas and pranayama which may provide relief i.e. sputa pawanmuktasana, Naukasana, Chakkichalanasana, Kashthatakshanasana, Shavasana Padamasana vajrasana, Simhagarjanasana, Marjarisana, Shashankasana, Bhujangasana, Matsyasana Garbhasana, Shalabhasana, Gomukhasana, Paschimottanasana, anulomaviloma, bhramari pranayama

Effects of Asanas on Body

Supta pawanmuktasana

It massages the pelvic muscles and reproductive organ

Naukasana

This asana stimulates the muscular, digestive, circulatory, nervous and hormonal systems and tones all the organs. It is especially useful in eliminating nervous tension and brings about the deep relaxation

Chakkichalanasana

This asana is excellent for toning the nerves and organs of pelvis and abdomen. It is useful for regulating the menstrual cycle

Kashtha Takshanasana

It helps to release the frustration and lighten the mood

Shavasana

This asana relaxes the whole psycho physiological system.

Padamasana

This holds the head and trunk like a pillar with legs as firm foundation. As the body is steadied mind become calm.

Vajrasana

This asana alters the flow of blood and nervous impulses in the pelvic region and strengthens the pelvic muscles. It has effect on nerves which supplies the genital organs. It alleviates menstrual disorders

Simhagarjanasana

It relieves frustration and release emotional stress.

Marjarisana

It gently tones the female reproductive system, giving relief from menstrual cramps.

Shashankasana

This asana stretches and strengthen the back muscles. This asana is also beneficial for the female reproductive system.

Bhujangasana

This asana tones the female reproductive system and alleviate the menstrual disorders

Shalabhasana

It strengthen the lower back and pelvic organs

Gomukhasana

It is an excellent asana for inducing relaxation. If practiced for 10 minutes or more it will alleviate the tiredness, tension and anxiety

Bhramari pranayama

It calms the nervous system and brings in a mental state of calm and peace

DISCUSSION

Above mentioned asanas having three types of effects on the body i.e. increase the flexibility, induce the relaxation and balancing action on the sympathetic and parasympathetic nervous system. Naukasana, Chakkichalanasana, Vajrasana, Marjarisana, Shashankasana, Shalabhasana strengthen the back muscles and massage the organs lies in the pelvis. By massaging it increases the blood supply to the organs. With increase in blood supply to the organs oxygen supply is also increased and give relief from muscle hypoxia which is the one of the most common factor responsible for the cramps in primary dysmenorrhoea. Kashtha Takshanasana, Shavasana, Padamasana, Vajrasana this group of asana having the calming action on mind. This effect can be explained by non specific decreased activation of the brain and secondary to decreased inputs from internal and external environment. This results in decreased anxiety and depression. Practices of asana develop muscle strength and flexibility which facilitate the diaphragmatic breathing. The asana are the poses mainly for health and strength of body Relaxation and meditation done with the help of diaphragmatic breathing releases the physical and emotional tensions. The asana regulate the working of muscles, viscera, endocrine, vascular, nervous and lymphatic system. Pranayama should be done after asana. Prana means vital energy or life force ayama is defined as extension and expansion. Thus the word pranayama means extension or expansion of the dimension of pranas. The technique of the pranayama provide the method whereby the life force can be activated and regulated in order to go beyond one's normal boundaries or limitations and attain a higher state of vibratory energy and awareness. The breath is the most vital process of the body. It influences the activities of each and every cell and most importantly is linked with the function of the brain. Most of the people breath incorrectly, use only small part of their lung capacity. The breathing is generally shallow, depriving the body of oxygen essential to its good health. Irregular breathing disrupts the rhythm of the brain and leads to physical emotional and mental blocks these in turn lead to inner conflict, a disordered lifestyle and disease. As we know Paroxysmal Gamma waves produced in brain during the Bhramari Pranayama (Vialatte *et al* 2009) which is associated with positive thoughts, feelings of happiness and acts as a natural antidepressant. In Bhramari Pranayama, pressing of the eyeballs leads to stimulation of the vagus nerve which in turn leads to activation of the parasympathetic nervous system (PNS). PNS is associated with a relaxed and calm state of mind and body (Speciale and Stahlbrodt, 1999; Zabara, 1992).⁶ Under the relaxing effects

of PNS, autonomic nervous system facilitates to decrease the stressing effects of sympathetic nervous system and channels it towards more relaxed PNS. Thus yoga has affected on whole body (physical and mental body). It brings the harmony between body and mind. It relieves the anxiety and regulates the hormones.

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