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"EFFECT OF YOGA THERAPY ON PRIMARY DYSMENORRHEA IN ADOLESCENT FEMALES" – A LITERARY REVIEW

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ABSTRACT

Introduction: Dysmenorrhea means painful menstruation. Although menstruation is the natural part of women's life & adolescent is the age group in which this transition is new for women. Unpleasant menstruation cramps in adolescent is very hard to handle. If this menstrual pain is severe, they can interrupt the regular activities in her life. The primary goal of pain treatment is to return the patient to optimal function. Yoga helps in that situation. Yoga is healthy way of life. It combines mind with body and soul. It is most powerful drugless system of treatment. Yogic *aasanas* affects the vital organs of the body & also regulates endocrine system in human. Which helps to minimize the pain. Aim: To study the effect of Yoga therapy on primary dysmenorrhea in adolescent female. Objectives – 1) To study effect of Yoga Therapy on Primary dysmenorrhea in adolescent females. 2) To study dysmennorrhea as Ayurvedic & modern perspective. 3) To create awareness about Yoga *Aasanas* effect on our body. **Material and Methods:** All literature related yoga & dysmenorrhea compiles from internet & scientific journals, articles, *ayurvedic* textbooks. **Conclusion:** The real role of yoga therapy on dysmenorrhea in adolescent women can be understand. Every women in her adolescent age has to understand importance of yoga in her life.

KEYWORDS: Yoga therapy, Yoga Aasanas, Dysmenorrhea, Adolescent women.

INTRODUCTION

Pain is an unwanted experience that can affect the individual experiencing it negatively depending on its intensity, location, quality and duration. One of the causes of pain among women is dysmenorrhea. Dysmenorrhea can be defined as pain during menstruation. Although the prevalence of dysmenorrhea varied in range from 25% of menstruating women in that 90% of adolescent females dysmenorrhea seems to be the most common. A significant population of women experience mild, moderate or severe pain during menses. Although menstruation is the natural part of women's life & adolescent is the stage of transformation from childhood to womanhood. Adolescents are often ignorant of their needs and good health. The knowledge, attitude and practices related to menstruation play an important role in shaping the self – image of adolescent girls. Various psychological and physical problems happen during this stage in life. So this unpleasant menstruation cramps is very hard to handle during adolescent age group. Since if menstruation pain is severe then they can interrupt the regular activities in her life. The health of an adolescent girl is an important part of the entire population. Dysmenorrhea can disrupt her personal life, and hence, is considered as a public health problem associated with substantial economic loss related to work absence.

Practice of yoga has been found to relieve menstrual problems in adolescent children. Also practice of yoga can give self- confidence, strength & menstrual health to these adolescent girls. The practice of yoga for health benefits and over all wellness has long been prompted by leading yoga teacher and educator. This potential has recently been recognize by general public. Yoga has become a focus of attention as a potential alternative treatment for common condition associated with woman's health and menstruation problems like dysmenorrhea.

Need of Study – In religious country like India, women act as backbone of every home and ultimately to country. More than half population lives in villages of India are working as farmer and 35-37 % Adolescent women are working in business firms. Means more than 80 % Adolescent women are take part in development of country. Dysmenorrhea affect the adolescent women's health by physically as well as mentally which reduces the working ability which ultimately affects the progress of nation. Hence to aware this condition to adolescent women and manage this through yoga therapy.

REVIEW OF LITERATURE

Many adolescents complaint of pain, anxiety, depression, fatigue, and vomiting during the menstrual phase. One of the most common menstrual problem is dysmenorrhea, with higher prevalence rate reported in adolescents. In Asia, 74.5% of girls who had reached menarche had dysmenorrhea. 51.7 percent of these girls reported that it affected their concentration in class, 50.2 % restricted their social activities, 21.5 % reported that it caused them to miss school and in 12% of girls, it caused poor school performance (Klein and Lin 1981).

Majority of the female adolescents identify dysmenorrhea and premenstrual symptoms as problems that significantly affect their academic performance and school absenteeism. Most of the girls were unaware of the causes of these symptoms. The severity of dysmenorrhoea was significantly associated with the duration of menstrual flow and menarcheal age. But it was not associated with age factor, or with height, weight, length of menstrual cycle or frequency of physical exercise (Hillen et al, 1999). Psychological factors such as stress and deprivation were found to be associated with menstrual irregularities (Sherry et al, 1988).

Yoga is one of the most commonly practiced mind-body practices (Saper et al, 2004). Practice of yoga can help in reducing many of the problems associated with adolescence. Adolescents in the yoga group reported lower levels of functional disability, less use of emotion-focused avoidance and lower anxiety following the intervention than adolescents in the control group. When the pre-and post intervention data for the two groups were combined, adolescents had significantly lower scores for gastrointestinal symptoms and emotion-focused avoidance following the yoga intervention. (Leora Kuttner et al, 2006). Yoga has been reported to relieve pain associated with dysmenorrhea and excessive levels of premenstrual tension (Bobak et al, 1993).

A randomized controlled trial on impact of Yoga Nidra on psychological general wellbeing in patients with menstrual irregularities was studied. The finding show that yoga nidra also minimizes the menstrual pain in women (Khushbu Rani et al, 2011).

Disease Review

Dysmenorrhea, also known as painful periods, or menstrual cramps, is pain during menstruation. Its usual onset occurs around the time that menstruation begins. Symptoms typically last less than three days. The pain is usually in the pelvis or lower abdomen. Other symptoms may include back pain, diarrhea, or nausea.

In young women painful periods often occur without an underlying problem. In older women it is more often due to an underlying issues such as uterine fibroids, adenomyosis, or endometriosis. It is more common among those with heavy periods, irregular periods, whose periods started before twelve years of age, or who have a low body weight. A pelvic exam in those who are sexually active and ultrasound may be useful to help in diagnosis. Conditions that should be ruled out include ectopic pregnancy, pelvic inflammatory disease, interstitial cystitis, and chronic pelvic pain.

[11]In Ayurveda Dysmenorrhea can be correlated to *Kashtaartava*. It is not separately described as a disease. But there are many diseases in which *Kashtaartava* is considered and described as symptoms. It is made by two word *Kashta* means painful & *Aartava* means menstruation. It is expressed as "*Kashthenamuchyatti Kashtartava*" i.e. the condition where *Aartava* is shaded with great difficulty and pain is termed as "*Kashtartava*." *Aacharya charaka* has mentioned none of gynaecological disease can be arise without affliction of aggravated *Vata*. So pain is caused due to vitiated *vata* or in combination with other *Doshas*.

Types of Dysmenorrhea[10]

Dysmenorrhea can be classified as either primary or secondary based on the absence or presence of an underlying cause. Primary dysmenorrhea occurs without an associated underlying condition while secondary dysmenorrhea has a specific underlying cause. The most common cause of secondary dysmenorrhea is endometriosis, which can be visually confirmed by laparoscopy in approximately 70% of adolescents with dysmenorrhea. Other causes of secondary dysmenorrhea include leiomyoma, adenomyosis, ovarian cysts, and pelvic congestion.

Primary dysmenorrhea is defined as cramping pain in the lower abdomen that occurs just before or during menstruation without identifiable pelvic pathology. Secondary associated symptoms include nausea, vomiting, fatigue, back pain, headaches, dizziness, and diarrhea. Primary dysmenorrhea has been reported as the leading cause of recurrent absenteeism from school or work in adolescent girls and young women, and is considered to be a common disorder among women of reproductive age. A survey of 1266 female university students found the total prevalence of primary dysmenorrhea to be 88%, with 45% of females having painful menstruation in each menstrual period and 43% of females having some painful menstrual periods.

Pathophysiology of Dysmenorrhea[9]

During a woman's menstrual cycle, the endometrium thickens in preparation for potential pregnancy. After ovulation, if the ovum is not fertilized and there is no pregnancy, the built-up uterine tissue is not needed and thus shed. Molecular compounds called prostaglandins are released during menstruation, due to the destruction of the endometrial cells, and the resultant release of their contents. Release of prostaglandins and other inflammatory mediators in the uterus cause the uterus to contract. These substances are thought to be a major factor in primary dysmenorrhea. When the uterine muscles contract, they constrict the blood supply to the tissue of the endometrium, which, in turn, breaks down and dies. These uterine contractions continue as they squeeze the old, dead endometrial tissue through the cervix and out of the body through the vagina. These contractions, and the resulting temporary oxygen deprivation to nearby tissues, are responsible for the pain or "cramps" experienced during menstruation.

Compared with other women, women with primary dysmenorrhea have increased activity of the uterine muscle with increased contractility and increased frequency of contractions.

Excessive production and release of prostaglandins during menstruation by the endometrium causes hyper-contractility of the uterus, leading to uterine hypoxia and ischaemia, which are believed to cause the pain and cramps in dysmenorrhea.

MANAGEMENT

Dysmenorrhea occurs less often in those who exercise regularly and those who have children early in life. Treatment may include the use of a heating pad. Medications that may help include NSAIDs such as ibuprofen, hormonal birth control, and the IUD. Taking vitamin B or magnesium may help. Surgery may be useful if certain underlying problems are present.

Estimates of the percentage of women of reproductive age affected varying from 20 to 90%. It is the most common menstrual disorder. Typically it starts within a year of the first menstrual period. When there is no underlying cause often the pain improves with age or following having a child.

Non-pharmacological, non-invasive, and minimally invasive interventions that have been proposed for obtaining relief from dysmenorrhea symptoms include Yoga therapy, acupuncture and acupressure, biofeedback, heat treatments, transcutaneous electrical nerve

stimulation (TENS), and relaxation techniques. In that Yoga therapy has maximum effect on dysmenorrhea.

Yoga is a term used to describe a variety of practices, although its literal translation in Sanskrit means "*yoke*" or "union." Yogic practices may include physical exercises (*Asanas*), breathing exercises (*Pranayama*), relaxation techniques, and meditation or concentration practices, including *Yoga Nidra* (a form of guided relaxation practice). Yoga practice in the modern context is primarily focused on Asana as a physical exercise regimen. The mechanism by which yoga may improve health is commonly considered to be its effect on the autonomic stress response. Yoga-based practices affect a complex series of physiologic and cognitive mechanisms, which in turn may affect aspects of self-regulation of stress.

The most probably performed yoga practices are postures (*Aasana*), controlled breathing (*Pranayama*) and Meditation (*Dhyana*).

Aasana is Sanskrit word used to describe a position of the body. It is defined as steady and comfortable posture. Traditionally many aasanas are practiced in Hatha Yoga primarily to achieve better physical and mental health. *Aasanas* have extraordinary capacity to overhaul, rejuvenate and to bring the entire system into state of balance. In different studies, the postures chosen are based on effectiveness in relieving dysmenorrhea. The nature of this pose and associated deeper & slower breathing patterns would physiologically reduce a women's oxygen consumption while stabilizing blood pressure and heart rate. Also this postures gives some stretching & relaxation to our body that minimizes menstrual pain & strengthen the muscles of over body.

Commonly in yoga manuals and instructional articles, women are advised to refrain from certain *Asanas*, such as the inversion postures *Sirsasana* (headstand) or *Sarvangasana* (shoulder stand) during menstruation, women are advised to refrain from Asana practice in the first 3 days of menstruation off from practice. Popular yoga manuals offer women specific sequences to be undertaken during menstruation. For example, Geeta Iyengar's Yoga: A Gem for Women recommends a sequence including *Konasana* and *Baddha Konasana* to ease dysmenorrhea, and Judith Hanson Lasater offers a sequence for menstruating women in The Moon Club: Honouring the Monthly Cycle, which aims to assist the body in releasing menstrual flow, reducing fatigue, and moderating hormonal shifts. Like Iyengar, her sequence is based around versions of *Baddha Konasana* and Upavistha *Konasana*. The

sequence of postures recommended for menstruation. *Baddha Konasana*, *Dhanurasana* (the bow), *Setu Bandha* ,*Sarvangasana* (bridge pose), *Ustrasana* (the camel), dolphin, and *Adho Mukha Svanasana* (downward dog). The PopSugar lifestyle site article "Skip the Ibuprofen and Do These Yoga Poses to Ease Period Pain" suggests a "half bound squat" (*Malasana*), arching pigeon (*Kapotasana*), one-armed camel (*Ustrasana*), a wide child's pose (*Balasana*), and a reclining twist.

A recent attempt to define a comprehensive theoretical framework from which hypotheses on how bottom-up neurophysiologic and top-down cognitive mechanisms may explain the effect of yoga on well-being has differentiated between the effects of the movement, breath and attention aspects of practice. It has also differentiated between several neurologic and physiologic processes that may be involved in self-reported changes in the well-being of yoga practitioners. These include the effect of yoga movement on the basal ganglia and cerebella circuits; the influence of yoga breathing practices on concentrations of oxygen and carbon dioxide in the blood; and the effect of the attention element of practice, akin to other meditative activities, on structural changes in parts of the brain responsible for bodily awareness.

Pranayama is a Sanskrit word meaning 'restraint of the prana or breath', which is often translated as breath control. Several researches have reported that this techniques are beneficial in treating a wide range of stress disorders. Practitioners report that the practice of pranayama develops a steady mind, strong willpower and sound judgment. Pranayama strengthens the lungs, improves their function and enhances the lung power. It improves defense mechanism of the body, slows down mental chatter and infuse positive thinking. Thus helps in relieving pain in dysmenorrhea.

Meditation is a process whereby consciousness look in and acts upon itself. The aim of meditation is to help still the mind and practice some form of contemplation or introspection. It increses plasma melatonin level which helps in relaxing the body & increase pain threshold capacity of our body. Yoga *Nidra* does the same thing & minimizes pain during dysmenorrhea.

Yoga may positively affect health, in particular the psychology and physiology of stress, there are practical benefits to suggesting yoga as an intervention for menstrual disorders: It is

not costly, requires no equipment, and is readily available. A recent meta-analysis of clinical trials found yoga to be as safe as usual care or exercise.

AIM

To study the effect of Yoga therapy on primary dysmenorrhea in adolescent females.

OBJECTIVE

1. To study effect of Yoga therapy on primary dysmenorrhea in adolescent females.
2. To study dysmenorrhea as *Ayurvedic* & modern perspective.
3. To create the awareness about Yoga *Aasanas* healthy effect on our body.

MATERIAL AND METHODS

For collection of data from various websites and research article on dysmenorrhea and yoga therapy followings were searched - PubMed, CINAHL/MEDLINE, Web of Science, AMED, Scopus, etc. All primary research studies were included.

RESULT

From research study, different aspects of Yoga therapy showed a significant improvement on primary dysmenorrhea in adolescent female.

CONCLUSION

The aspect of Yoga therapy especially *Aasanas*, *Pranayama* and Meditation gives beneficial impact on primary dysmenorrhea in adolescent women. Also improves their quality of life.

Further research on the relationship between yoga practice and dysmenorrhea is warranted, but there must be both consistency in the methods, measures, and quality of studies and a shift toward research on yoga practices that are replicable outside of the clinical trial setting.

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