



EFFECT OF TRACHYSPERMUM AMMI ON PRIMARY DYSMENORRHEA

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ABSTRACT

Dysmenorrhoea literally means painful menstruation. Primary Dysmenorrhoea is described as painful menstruation of sufficient magnitude to incapacitate the day to day activities. Primary Dysmenorrhoea affects more than 50% of women and quite severe in about 15% of women. Primary Dysmenorrhoea refers to one that is not associated with any identifiable pelvic pathology. Dysmenorrhoea may be correlated with *Kashtartava* due to the resemblance of its sign and symptoms. Dysmenorrhoea (*Kashtartava*) is mentioned as symptom of many disorders like *Vatala Yonivyapada*, *Sannipatiki Yonivyapada*, *Paripluta Yonivyapada*, *Mahayoni*, *Udavartini Yonivyapada*, *Antarmukhi Yonivyapada*, *Suchimukhi Yonivyapada* and *Vataja Artava Dushti*. Trachyspermum ammi (Yavani) is a well-known herb available in every kitchen. According to Ayurveda authorities, Yavani is *Vatanulomana*, *Shothahara*, *Shoolaghna* etc.

Keywords: *Dysmenorrhoea, Yonivyapada, Kashtartava, Trachyspermum ammi, Yavani*

INTRODUCTION

Dysmenorrhoea is the most common gynecological problem faced by female during adolescence which causes significant discomfort and anxiety for the woman as well as family. Primary Dysmenorrhoea is described as a pain that is of uterine origin and directly linked to menstruation but with no visible pelvic pathology [1]. The incidence of Primary Dysmenorrhoea of sufficient magnitude with incapacitation is about 15-20% [2]. Primary Dysmenorrhoea is extremely common, especially among adolescents, as many as 90% of adolescent females and above 50% of menstruating women worldwide report suffering from it, with 10-20% of them describing their hurt as severe and distressing [3]. In the classics of *Ayurveda*, Dysmenorrhoea is mentioned as symptom in many disorders like *Vatala Yonivyapada*, *Sannipatiki Yonivyapada*, *Paripluta Yonivyapada*, *Mahayoni*, *Udavartini Yonivyapada*, *Antarmukhi Yonivyapada*, *Suchimukhi Yonivyapada* [4]. Based on prominent symptoms mentioned by *Acharya* it is more reasonable to correlate it with *Udavartini Yonivyapada*. The main cause of Primary Dysmenorrhoea (*Kashtartava*) is vitiation of *Vatadosha* (*Apana* and *Vyana Vata*) which should be corrected through the drugs of *Vatashamaka* and *Vatahara* properties. Though *Yavani* (*Trachyspermum ammi*) is a well-known herb available in every Indian kitchen and

traditionally, it was used for cure numerous ailments due to its specific properties as *Vatanuloman*, *Shothahara*, *Shoolaghna* etc. [5]. *Acharya Charaka* said *Yoniroga* does not occur without vitiation of *Vata* [6]. *Kashtartava* has strong relation with *Vata Dosha* because pain does not occur without vitiation of *Apana Vata Dushti* [7]. As normal menstruation is attributed to the *Apanavayu Karma* [8] and hence painful menstruation is related with the vitiation of *Vata* especially the *Apana Vayu*, so painful menstruation is related is considered as *Apana Vata Dushti* [9].

AIM AND OBJECTIVES-

- To analyze the effect of *Yavani* (*Trachyspermum ammi*)
- To study the Primary Dysmenorrhoea (*Kashtartava*) in detail.

Kashtartava- In the classics of *Ayurveda*, Dysmenorrhoea is mentioned as symptom in many disorders like-

Vatala Yonivyapada- *Acharya Charaka* writes that a woman of *Vata prakrti*, when consumes diet and indulges in other activities capable of aggravating *Vayu*, then provoked *Vayu* reaching reproductive systems produces pricking and other pain, stiffness, sensation as if creeping of ants, roughness and numbness, etc. Due to *Vata* the menstruation appears with sound, is painful, frothy, thin and dry [10].

Sannipatiki Yonivyapada- Acharya Charaka says that due to consumption of congenial and non-congenial both type of Rasas together, all the three Doshas situated in Yoni and uterus get vitiated and produce their specific symptoms. There is burning sensation and pain in vagina, yellowish and white unctuous vaginal discharges. Her menstrual discharge is also whitish pale and unctuous [11].

Paripluta Yonivyapada- Acharya Charaka has written that when a woman having predominance of Pitta, withholds her natural urge of sneezing and eructation at the time of coitus, then vitiated Pitta getting mixed with Vayu reaches Yoni and produces its abnormalities. The Yoni becomes inflamed and tender and she gets painful menstruation having yellowish or bluish colour of menstrual blood. She also suffers from pain in lumbosacral and groin region, backache and fever [12].

Mahayoni- Acharya Charaka says that vitiated due to coitus in an uneven and troublesome bed, causes firmness and dilation of orifices of uterus and vagina both. In this condition menstrual blood is dry and frothy, there is pain during menstruation. This condition having muscular protuberance in yoni associated with pain in joints and groin region is known as Mahayoni [13].

Udavartini - Acharya Charaka says that due to movement of flatus etc. natural urges in

reverse direction, the aggravated Vayu moving in reverse direction fills Yoni. This Yoni seized with pain, initially throws or pushes the raja upwards, then discharges it with great difficulty. The lady feels relief immediately following discharge of menstrual blood, since in this condition the Raja moves upwards or in reverse direction, hence it is termed as Udavartini [14].

Antarmukhi Yonivyapada- when a woman, sleeping in abnormal posture, indulges in coitus, then her Vayu situated in Yonisrotas getting pressed by food produces different types of pain in bone and muscles and also crooks the mouth of the Yoni. There is severe pain in Yoni and dyspareunia. This condition is known as Antarmukhi [15].

Suchimukhi Yonivyapada- Acharya Charaka says that when a pregnant woman consumes a diet or has mode of life capable of aggravating Vata, then this aggravated Vayu due to dryness vitiates yoni of the female fetus, thus the orifice of Yoni becomes very narrow [16].

Kastartava means painful menstruation, pain does not enable us to understand the exact discomfort from which the patient is suffering. Hence, it is necessary to ask about characteristics of pain. The nature of pain signifies the intensity of pain. In primary dysmenorrhoea nature of pain is spasmodic [17].

Mechanism of pain in Dysmenorrhoea- Due to severe vasodilation, ischemia,

obstruction, inflammation etc. conditions, nerve receptors are directly stimulated by mechanical stress or indirectly by algogenic substances like PGs, Bradykinin etc. which are produced due to tissue damage. By the receptors, stimuli go to spinal segment and then pass to ascending tract and reach the pain center of brain, then we identify the pain, the same process of pain production takes place in Dysmenorrhoea [18].

Properties of Trachyspermum ammi (Yavani)-

Rasa - Katu, Tikta

Guna- Laghu, Ruksha, Tikshna.

Veerya - Ushna

Vipaka- Katu

Phytochemicals in the Trachyspermum ammi (Yavani)-

In Ayurvedic classics *Yavani* - *Trachyspermum ammi* is mentioned with pain reduction property. *Yavani* (*Trachyspermum ammi*) is used for dysmenorrhoea. *Trachyspermum ammi* contains various phytochemical constituents mainly carbohydrates, glycosides, saponins, phenolic compounds, volatile oil (thymol, γ -terpinene, para-cymene, and α - and β -pinene). The volatile oil mainly contain thymol which has antispasmodic efficacy [19].

Pharmacological activities of Trachyspermum ammi (Yavani) -

Antispasmodic, Antihypertensive, Hypolipidemic, Digestive stimulant,

Hepatoprotective, Broncho dilating, Diuretic, Antiplatelet Aggregatory, Antitussive etc. [20].

MATERIAL AND METHOD-

Ayurvedic Ancient texts like *Charaka Samhita* etc., Modern texts, Different articles from PUBMED, Google Scholar etc.

DISCUSSION-

Dysmenorrhoea is defined as a severe painful cramping sensation in the lower abdomen often accompanied by other biologic symptoms including backache, pain in thighs and leg, headache, body ache, nausea, vertigo, nervousness, etc, all occurring just before or during the menses. The definition has been subdivided into Primary and Secondary Dysmenorrhoea. The term Primary Dysmenorrhoea is reserved for women who had no obvious pathologic condition. Dysmenorrhoea is mentioned as symptom in many disorders like *Vatala Yonivyapada*, *Sannipatiki Yonivyapada*, *Paripluta Yonivyapada*, *Mahayoni*, *Udavartini Yonivyapada*, *Antarmukhi Yonivyapada*, *Suchimukhi Yonivyapada* and *Vataja Artava Dushti Vatala*, *Paripluta*, *Mahayoni*, *Udavartini Yonivyapada* and *Vataja Artava Dushti* [21]. The clinical features of primary Dysmenorrhoea resembles with characteristics signs and symptoms of *Kashtartava*. So it can be correlated with *Kashtartava* [22].

Trachyspermum ammi (*Yavani*) seeds contain essential oil with 50% thymol as main ingredient which act as strong germicide, anti-spasmodic and fungicide [23]. Thymol is volatile contain. Further, studies reveal presence of various phytochemical contents including carbohydrates, glycosides, saponins, phenolic compounds, volatile oil (thymol, γ -terpinene, para-cymene, and α - and β -pinene), protein, fat, fiber and mineral matter containing calcium, phosphorous, iron and nicotinic acid [24]. These studies reveal that *T. ammi* is a source of medicinally active components and have various pharmacological effects; hence, it is encouraging to find its new therapeutic uses. Medicinally, it has been proven to possess various pharmacological activities like antifungal, antioxidant, antimicrobial, antinociceptive, cytotoxic, hypolipidemic, antihypertensive, antispasmodic, bronchodilating actions, antilithiasis, diuretic, abortifacient, antitussive, anthelmintic and antifilarial [25].

Acharyas has described mainly *Shoolprashamana* and *Vatanuloman* action of *Yavani* on the basis of its pharmacological properties [26].

Katu, *Tikta Rasa* present in *Yavani* improves *Jatharagni* and correct digestion and metabolism.

It pacifies the *Vatadosha* mainly because of *Ushna Veerya* property. *Laghu Ruksha*

Guna and *Ushna Veerya* pacify the slight *Kapha* vitiation. Due to *Katu Rasa* and *Katu Vipaka*, *Ushna Virya* and *Tikshna, Ruksha Guna* it acts as a *Garbhashayottejaka*. *Yavani* has *Vatanuloman* property which corrects the direction of *Vata* and normalizes the function of *Apana Vata* which regulates the flow of menstruation and subside the symptoms of Primary Dysmenorrhoea [27].

CONCLUSION:

Trachyspermum ammi provides encouraging result for the management of primary dysmenorrhoea hence it can be an effective herbal remedy without any adverse effect.

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