



Case Study

## EFFECT OF SHODITHA HINGU (FERULA ASAFOETIDA LINN) PRAYOGA IN THE MANAGEMENT OF KASTARTHAVA (PRIMARY DYSMENORRHOEA) - A CASE REPORT

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ABSTRACT

Dysmenorrhea is one of the leading gynaecological disorders affecting women irrespective of age, economic status and the nationality. Primary dysmenorrhoea being one among the two types of dysmenorrhoea can be correlated to Kastartava in Ayurveda. Though the direct reference is not available, it can be compared to Kastartava or Udvartini yonivyapad because of upward movement of the Vata-kapha dosha along with Arthava associated with severe pain. In the present study, a female student aged 18yrs attended the OPD of Sushrutha Ayurvedic Medical College and Hospital, Bengaluru with the complaints of primary dysmenorrhoea was managed with Hingu prayoga for 3 months based on the Ayurvedic principles of management that are described in the classics by Acharyas. Significant reduction in abdominal pain and back pain was observed. Reduction of pain was stable during the three months of intervention and no adverse effects were found either during or after the treatment.

INTRODUCTION

Dysmenorrhoea is being the most common gynecological disorder in women regardless of age, economic status and nationality The prevalence of dysmenorrhoea estimates from 45% to 95%.<sup>[1,2]</sup> It has become the leading cause of gynecological morbidity in women of reproductive age.<sup>[3-6]</sup> According to The International Association for the Study of Pain, pain is defined as "an unpleasant emotional and sensory experience associated with actual or potential tissue damage, or described in terms of such damage". Dysmenorrhoea is one such condition represented as one of the most common causes of pelvic pain and menstrual disorder. It is defined as the presence of painful cramps during menstruation that is of uterine origin. <sup>[7]</sup>

Based on the pathophysiology, dysmenorrhoea is commonly divided into two categories as primary and secondary dysmenorrhoea, where primary dysmenorrhoea is the menstrual pain without organic disease, and secondary dysmenorrhoea is menstrual pain associated with an identifiable disease. Common causes of secondary dysmenorrhoea include endometrial polyps, pelvic inflammatory disease, use of an intrauterine contraceptive device endometriosis, fibroids (myomas) and adenomyosis. <sup>[8]</sup>

A detailed history and physical examination are usually sufficient for making a diagnosis of primary dysmenorrhea, but further investigations may help to rule out the secondary causes. Ultrasound is very useful in for tracing out endometriosis and adenomyosis etc secondary causes of dysmenorrheal. <sup>[8, 9]</sup> In the management, pain relief is the main aim of primary dysmenorrhoea and NSAIDs are usually the first-line therapy for dysmenorrhea which is being given for at least three menstrual periods or 3 months. <sup>[10, 11]</sup>

Commonly prescribed NSAIDs are aspirin, naproxen, and ibuprofen are very effective in relieving period pain. Sometimes, along with NSAIDs, Oral Contraceptives are combined. These NSAIDs act by blocking the prostaglandin production through an

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enzyme responsible for formation of prostaglandins inhibition called cyclooxygenase. [12]

As the recurrent menstrual pain is associated with central sensitization and further associated with structural and functional modification of the central nervous system, it becomes essential to treat the menstrual pain in order to limit its virulent effect on the central nervous system. By these, dysmenorrhoea makes the women more susceptible to other chronic pain conditions later in life with long-term consequences. [13, 14]

Ayurveda, an Ancient medical science has the vast description of treatments for the *Stree rogas* i.e., for women. In Ayurveda, though there is no direct reference of primary dysmenorrhea, but can be correlated with *Udavartini Yonivyapada*, where *Arthava* moves upwards, which has *Kastarthava* (painful menstruation) as one of the symptoms. [15] *Vata* is said to be responsible for all *Yoni rogas* especially *Udavartiniyoni vyapad*. [16] The Ayurvedic medications which are more effective with respect to alleviate *Vata dosha* and effective in giving relief of the affected women, with no adverse side effects is the need of hour. Hence in the present study, *Hingu* (*Ferula asafoetida* Linn) which is well known as *Vatanulomana*, *Artava janaka* (inducing menstruation), *Shoola prashamanam* (relieves pain) etc was selected and evaluated for its efficacy.

**METHODOLOGY**

**CASE REPORT**

18 years old unmarried female student attended the OPD of SAMC & H on 06-Jan-2021. She presented with the complaints of lower abdominal pain during menstruation. Pain was more on the first

**Assessment of Pain**

**Table 1: Verbal multidimensional scoring system for assessment of the severity of dysmenorrhea [17]**

Severity grading		Working ability	Systemic symptoms	Analgesics
Grade 0	Menstruation is not painful and daily activity is unaffected	Unaffected	None	None required
Grade 1	Mild. Menstruation is painful but seldom inhibits normal activity; analgesics are seldom required; mild pain	Rarely affected	None	Rarely required
Grade 2	Moderate. Daily activity is affected; analgesics required and give sufficient relief so that absence from school is unusual; moderate pain	Moderately affected	Few	Required
Grade 3	Severe. Activity clearly inhibited; poor effect of analgesics; vegetative symptoms (headache, fatigue, vomiting, and diarrhea); severe pain	Clearly inhibited	Apparent	Poor effect

day of menstruation, associated with severe back pain and occasional syncope for 2 months. Has the same complaint since past 6 years (since menarche).

**Place of Study**

OPD of Sushrutha Ayurvedic Medical College and Hospital, Prashanti Kuteera jodi Bingipura, Jigani Hobli, Anekal, Taluk, Bengaluru, Karnataka.

**Family History**

Elder sister (21-year-old) also has primary dysmenorrhea. All other family members are healthy.

**Treatment History**

Patient has taken modern medications for combating the pain, during menstruation (details not known) and had just temporary relief.

**Menstrual History**

**Menarche:** At 13 years of age.

**Menstruation:** Regular with 3-4 days duration / 38-42 days cycle, 2 pads per day, with clots and pain.

**Pain:** Intermittent, first and second day of the menstrual cycle.

**Personal History**

- *Prakruti* - *Vata pradhana kapha*
- *Nadi* – 76 bpm
- *Mala* – once per day, normal consistency.
- *Mutra*- 4 to 6 times a day, NAD.
- *Akruti*- *Madhyama*, BMI= 23.

**Investigation**

1. Hb%: 11.5 gm/dL
2. USG (Pelvis): Uterus is of normal size and shape. No pathology was detected.

**Intervention**

500mg of *Hingu* (Ferula asafoetida Linn) was taken and fried in 2 spoon of cow's ghee (Nandini) and was divided into 3 equal parts. It was administered to the patient three times a day on the first and second day of menstruation before the food.

**Quantity:** 500 mg in 3 divided dose/ 24 hours.

**Time of Administration:** Just before food.

**Purification (Shodhana):** Frying in ghee.

**Duration:** First and second day of menstruation.

**Follow Up:** Every menstrual cycle for 3 months.

**Dietary Advice**

- *Pathya Ahara:* Ghrita, Taila, Dugdha, Lashuna, Mamsarasa, Shaka varga, Draksha etc.
- *Apathya Ahara:* Fast food, bakery products, chips, biscuits etc.
- *Pathya Vihara:* Yogasanas like Bhujangasana, Marjarasana, Vajrasana, Padmasana.
- *Apathya Vihara:* Ati-vyayama, Vega-dharana etc.

**RESULTS**

It was very essential to improve the quality of life of the patient as she was a student and had to attend her daily classes. Though the patient had been to several treatments before, had not found relief with any of those and wanted to undergo the Ayurveda treatment for the first time. In the Ayurvedic management, patient was administered the treatment for 3 months continuously with the *Shodhita hingu* and assessed for the signs and symptoms. The patient had significant relief in the abdominal pain during menstruation and in back pain with no episodes of syncope. The patient was able to carry out the routine activities and was also able to attend her college duties without any discomfort. Her quality of life had improved. The patient was productive throughout the menstruation. She was asked to follow up and no adverse effects were seen during and after the treatment.

**Table 2: The assessment of pain of the patient was done as below**

Assessment	Follow up 1 (Jan-2021)	Follow up 2 (Feb-2021)	Follow up 3 (Mar-2021)
Severity grading	Grade 2	Grade 2 (Pain reduced only by taking <i>Hingu</i> , in absence it reappeared)	Grade 1 (Mild pain)
Working ability	Clearly inhibited	Rarely affected	Unaffected
Systemic symptoms	None	None	None
Analgesics	Required	Only <i>Shodhita hingu</i>	Only <i>Shodhita hingu</i>

**DISCUSSION**

Dysmenorrhoea is one of the common gynaecological disorders and in Ayurveda, it can be correlated to *Kashtartava* or *Udavartini yonivyapad*. *Vata* vitiation is said to be the main cause of this menstrual disorder. Ayurvedic science has described various treatments, therapies and dietetic regimens to regulate the uterine contractions and uterine tone. Many studies have also been conducted on the same to evaluate the effects of the various formulations that are described in classics of Ayurveda.

In one of the study, the role of *Rajahpravartini vati* on primary dysmenorrhoea or the *Kastartava* was evaluated and found significant reduction in the menstrual pain and improvement in the quality of life. The pain that reduced was also stable during the follow up period even without any intervention. [18] Ayurvedic formulations such as *Rajahpravartini vati* also contains *Hingu* as the prime ingredient with (*Ferula asafetida* H.Kar.st) purified *Kaseesa* (Ferus

sulphate), purified *Tankana* (borax) and pulp of *Aloe vera* Linn in equal quantity which is processed in Juice of *Aloevera* and *Hingu* is reported to have antispasmodic activity. [19] In the present study, an attempt was made to analyse the Ayurvedic line of treatment with the administration of *Shuddha hingu* purified with ghee for 3 months.

**Probable Action of Hingu (Ferula Asafoetida Linn)**

The time of administration of *Hingu* was selected as before food, because Vagbhata has mentioned "*Apane vigune annadhau*". *Hingu* was purified and made *Shuddha* by frying it with *Ghrita*. [20] *Shuddha Hingu* (purified Ferula asafoetida Linn) was selected for this study due to its beneficial property such as *Artava janaka* (inducing menstruation). [21] Ferutinin is one of the components of *Hingu* that has phytoestrogenic property. [22] Charaka has explained the qualities of *Hingu* as "*Hingu shoola prashamanam*

*vidhyaath paachanam rochanam*", since the gum resin of *Ferula asafoetida* Linn, was helpful in reducing the colicky pain (*Shoola prashamanam*), carminative (*Paachanam*) and also palatable (*Rochanam*).<sup>[23]</sup> The present study focused on administration of *Shuddha hingu prayoga* on the patient of primary dysmenorrhoea to evaluate its effect. Charaka elucidates *Chedana* (scrapes the channels) as one of the qualities of *Hingu* and Vagbhata describes the qualities as "*Hingu vatakapha aanaha Shooladhna pitta kopanam, Katu paaka rasam ruchya deepanam paachanam laghu*".<sup>[24]</sup> These properties of *Hingu* plays an effective role in reducing *Vata-kapha dosha*, bloating, pain, increases *Pitta dosha*, with its *Katu paaka, Katu rasa*, palatable (*Ruchya*), digestive (*Deepana-Paachana*) and light (*Laghu*) for digestion properties. With all these qualities, *Hingu* (purified *Ferula asafoetida* Linn) may be was effective in providing the significant relief in the patient of primary dysmenorrhoea.

The mechanism of initiation of uterine pain in primary dysmenorrhea is difficult to establish. But the following are too often related, mostly confined to adolescent girls. The pain is related to dysrhythmic uterine contractions and uterine hypoxia. Uterine myometrial hyperactivity has been observed in cases with primary dysmenorrhea. These signs and symptoms are clearly explained in *Udavartini Yonivyapada*. The aggravated *Vayu (Apana vayu)* moves in reverse direction and it fills up the uterus. Due to movement in opposite directions, there is difficulty in discharge of menstrual blood, as the flow is reversed. Whenever there is small amount of discharge of the menstrual blood, the patient feels relief. As *Hingu* (*Ferula asafoetida* Linn) is endowed with *Vatanulomana, Shoola prashamana* and *Arthava janana* properties, the treatment of primary dysmenorrhoea with *Hingu* turned out to be the effective, affordable and cost-effective remedy.

## CONCLUSION

Primary dysmenorrhoea can be compared with *Kastartava* or *Udavartini Yonivyapada* based on the symptoms. Due to the upward movement of the *Vata-kapha dosha* along with *Arthava*, the condition will be associated with severe pain and it comes down once there is downward movement followed by expulsion of *Artava*. To facilitate this downward movement and expulsion of *Artava*, *Shoditha hingu*, which is having various properties of *Vatanulomana, Artava janaka* (inducing menstruation), *Shoola prashamanam* (relieves pain) etc was administered to the patient with the complaints of primary dysmenorrhoea for 3 months and the study showed significant relief in reducing the abdominal pain and back pain on the first day of the menstruation. The reduction in pain was

stable both during and even after the treatment. No adverse effects were observed. *Shoditha Hingu* turned out to be the effective, safe, affordable and cost-effective remedy without any adverse effects.

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