

## REVIEW ARTICLE

## Role of herbal medicine in Ussurutams (Dysmenorrhoea)

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### Abstract

Dysmenorrhoea is defined as painful menstruation of sufficient magnitude so as to incapacitate day-to-day activities. They affect 80% of women at some time in their lives; usually they are not assigning of a serious underlying problems. It is a condition where there will be painful menstruation associated with abdominal cramps, backache, nausea and vomiting, stiffness in thighs, cramps in calf muscles. Pain usually last for 2 or 3 days and tends to happen in the first few days of the period. Up to 15% of women have period pains, severe enough to interfere with their daily activities. This can lead to missing days at work or diseased participation in social or sporting activities. Dysmenorrhoea is of two type namely primary and secondary dysmenorrhoea. Primary dysmenorrhoea is used to describe normal period pain experienced by many women during the time of their period and there is no underlying medical problem. Secondary dysmenorrhoea is used to describe pain results of an underlying gynecological problem. There are number of measures like sitz bath, simple morning walk and dietotherapy. There are number of herbal drugs mentioned in Unani literature which are useful in tackling this problem. The review highlights about dysmenorrhoea and some of those herbal drugs which are used in Unani System of medicine.

**Keywords:** Dysmenorrhoea, backache, nausea, vomiting, calf muscles, sitz bath, herbal drugs, Unani.

### Introduction

Dysmenorrhoea is defined from the Greek word Dys, meaning difficult/painful/abnormal; mens meaning month and rrhoea meaning flow. It is a medical condition characterized by severe uterine pain during menstruation. While many individuals experience minor pain during menstruation; dysmenorrhea is diagnosed when the pain is so severe as to limit normal activities, or require medication. Dysmenorrhoea is one of the most common gynecological complaints in young women who present to clinicians. This disorder is traceable to a debilitated and toxic condition of the human system in general and of the sex organs in particular due to a wrong diet, wrong style of living and nervous exhaustion. Dysmenorrhoea may affect more than half of menstruating women (Tindall, 1996; Dawn, 2000; Khan, 2003; Padubidri and Daftary, 2004). The prevalence of dysmenorrhoea can be quite variable. The peak incidence of primary dysmenorrhoea occurs in late adolescence and the early 20s.

According to US data, the incidence of dysmenorrhoea in adolescents is reportedly as high as 92%. The falls with increasing age and with increasing parity is reported. In an epidemiological study of an adolescent population prevalence of dysmennorrhoea of 59.7% of patients reporting pain, 12% described it as severe, 37% as moderate and 49% mild.

According to Indian data in the first year of menarche 38% of girls develop dysmenorrheal pain, in the second and third year after menarche 20% experience pain. About 80% of women who develop dysmenorrhoea do so within 3 years of menarche. Over the age of 25 years, the cause of dysmenorrhoea is usually secondary to other pelvic problem (Andresch and Milsom, 1982). In classical Unani texts dysmenorrhoea is not defined under the same heading but it is defined under different topics like Ehtebas-e-tams and Waja-u-zahar. The menstrual bleeding in dysmenorrhoea is small in amount and comparatively thick in consistency. The pain becomes severe before or during menstruation.

#### Classification of Dysmenorrhoea

- a. Spasmodic or primary dysmenorrhoea (*Tashannuji ussuruttams*)
- b. Congestive or secondary dysmenorrhoea (*Iltehabi ussuruttams*)

#### a. Spasmodic or primary dysmenorrhoea (*Tashannuji Ussurutams*)

Primary dysmenorrhoea refers to the presence of recurrent crampy lower abdominal pain that occurs during menses in the absence of demonstrable pelvic diseases. It typically occurs in the first few years after menarche and affects 5% of post pubescent females (Dawn, 2000; Khan, 2003). Menstrual disturbances occur during dysmenorrhoea.

Due to severity of pain, patient needs bed rest every month. After that patient feels generalized weakness. While exploring the Unani literature in depth it is observed that the condition of spasmodic dysmenorrhoea is very much mimicking to balghami khilt or saudavi khilt.

#### *Etiopathogenesis of spasmodic dysmenorrhoea*

**Psychological:** Girls with anxiety has low pain threshold and suffers more primary dysmenorrhoea.

**Muscular in coordination:** Spasmodic dysmenorrhoea due to in coordinate muscle action of the uterus, which is due to an imbalance in the autonomic nervous control of muscles, one in which an overactive sympathetic system leads to hypertonus of the circular fibers of the isthmus and internal os.

**Cervical obstruction:** Organic stricture of the uterus can cause severe pain. The pinpoint os and narrow cervical canal commonly associated with an acutely anteverted uterus or retroverted uterus may cause delay in the passage of menstrual blood and clots.

**Uterine hypoplasia:** The uterus is cochleate or has a long cervix. In this type of uterus myometrium contains an excessive amount of fibrous tissue, which disturbs the normal contraction pattern or uterus becomes triangular in shape, i.e. body of uterus becomes short having long cervix, causes difficulty in menstrual flow hence patient feels severe pain.

**Hormonal imbalance:** Spasmodic dysmenorrhoea is invariably associated with ovulatory cycles. Progesterone stimulates myometrial contraction of the smooth muscles of the cervix and causes narrowing of the cervical canal.

**Excess prostaglandin (PGF<sub>2</sub> alpha and PGE<sub>2</sub>):** Excess prostaglandins are released from secretory endometrium to cause spasm of uterine muscles during menses. It is confirmed by the fact that, Prostaglandin triggers the contraction of muscles of uterus therefore narrowing of diameter of small blood vessels of uterus so temporary shutdown of blood supply to uterus leads to depriving muscles of oxygen resulting menstrual cramp.

**Excessive humor:** Sometimes on eating of ghaleez diet, the excess of phlegm (balgham) and black bile (sauda) occurs due to which the consistency of blood also becomes thick. Therefore the perfusion of blood became difficult into small veinules, resulting dysmenorrhoea.

#### *b. Congestive or secondary dysmenorrhoea (Iltehabi Ussurutams)*

It is defined as menstrual pain resulting from anatomic and or macroscopic pelvic pathology, such as that seen in women with endometriosis or chronic PID. This condition is most often observed in women aged in between 30-45years (Dawn, 2000). The pain in dysmenorrhoea starts at the time of menstruation.

On first day pain becomes severe and gradually passes off in subsequent days. Pain occurs in pelvic region and back. Patient may have some other symptoms like nausea, vomiting and loose motions during attack. The condition of congestive dysmenorrhoea is very much mimicking to damvi khilt.

#### *Etiopathogenesis of congestive dysmenorrhoea*

1. Endometriosis
2. PID
3. Ovarian cysts and tumors
4. Cervical stenosis or occlusion
5. Fibroid
6. Uterine polyps
7. Intrauterine adhesion
8. Intrauterine contraceptive device
9. Pelvic congestion syndrome
10. Allen-masters syndrome

#### *Factors that acts as precursor for dysmenorrhea*

1. Adolescence
2. Anxiety or stress
3. Body mass index <20 or >30 kg/m<sup>2</sup>
4. Depression, especially if associated with an eating disorder
5. Disrupted social networks
6. Family history, especially in a first-degree relative
7. Menarche at a young age
8. Menorrhagia
9. Metrorrhagia
10. Nulliparity
11. Smoking

#### *Preventive measures*

1. Morning walk
2. Light exercise: Exercise may be a way to reduce the pain of menstrual cramps, through the production of endorphin by the brain, the body's own pain killers.

#### *Curative measures*

1. Heat application
2. Application of heat to the lower abdomen appears to be as effective as oral analgesics for relief of dysmenorrhoea.
3. Dietotherapy

According to Unani, physicians like Razi and Jurjani the patient should take water of soaked gram, baha ka shorba, safed baj, baizai murgh neem biryan ki zardi, maullaham, murgh ka shorba, anar sheeren, milk, gazar dashti (Khan, 1940; Azmi, 1995;).

1. Diet rich with fiber, calcium and complex carbohydrates helps to ease cramps.
2. Fruits and salads are nature's body cleansing foods.
3. Magnesium helps to reduce water retention, which is present in whole grains, nuts and green vegetables. Fish and meat also contain significant amounts of magnesium.
4. Use of diet rich with calcium carbonate and Vitamin B complex regularly.

5. Take vegetable oils like olive, sunflower, and safflower oils, nuts, whole grains and green leafy vegetables containing vitamin E in a dose of 400 IU one or two times a day for 3 cycles.
6. Take salmon and other fishes containing Omega-3-fatty acids.
7. Drink 6-8 glasses of water and enough milk every day.
8. Health restoring foods like whole grain, nuts and seeds especially in sprouted form to be taken.

#### Conventional treatment available

1. Prevention
2. Analgesics (NSAIDs) and antispasmodic drugs
3. Hormonal therapy like OCPs
4. Surgical treatment
  - a. Dilatation of the cervix
  - b. Injection of the pelvic plexus
  - c. Presacral neurectomy

#### Limitations of the conventional treatment

NSAIDs: GI bleeding, CRF, hepatic failure, mental confusion, seizures precipitation, thrombocytopenia, hemolytic anaemia, angioedema.

OCPs: Weight gain, cholasma, pruritus vulvae, carbohydrate intolerance, precipitation of diabetes, leg veins and pulmonary thrombosis, coronary and cerebral thrombosis leading to Myocardial Infarction, HTN, raise plasma HDL/LDL ratio, genital carcinoma.

Surgery: uncomfortable, expensive, leading various complications.

#### Scope of Unani medicine

It is very well understood that there are limitations and toxicities of the conventional treatment, therefore Unani system of medicine can play an important role as it is safe, effective and based on historical evidence of their prolong successful use on human beings.

#### Unani treatment

1. To remove the cause.
2. To maintain hygienic condition.
3. To correct the generalized weakness of the patient, use of Kushta faulad along with Dawaul misk motadil jawaher wali, Khamira Abresham Hakeem Arshad wala, Maul Laham, Sharbat Anar are indicated.
4. Musakkin-e alam wa Dafe Tashannuj advia (Analgesic and antispasmodic drugs) like-.Abhal (*Juniperus communis*), Aftimun hindi (*Cuscuta reflexa*), Asrol (*Rauwolfia serpentine*), Afyun (*Papaver somniferum*), Lehsun (*Allium sativum*) in case of spasmodic dysmenorrhea.
5. Anti-inflammatory drugs and Antiseptic drugs-Baboon (*Matricaria chamomilla*), baranjasif (*Artemisia vulgaris*), barge kasni (*Cichorium intybus*), barge-mako (*Solanum nigrum*), izkhar (*Andropogon jawarancusa*), Hasha (*Thymus vulgaris*), hilteet (*Ferula foetida*), darchini (*Cinnamomum zeylanicum*), kafoor (*Cinnamomum camphora*) in case of congestive dysmenorrhea.

6. Mudire tams wa Mudire Haiz advia (Emmenagogue and diuretic drugs) like, Sheera khurfa along with Sharbate Bazoori, Roghan badam talkh (*Prunus amygdalus*), Tukhme Gandana (*Allium ascalonicum* Linn.), Tukhme Shalgham (*Brassica rapa* Linn.), Darchini (*Cinnamomum zeylanicum*), Sazaj Hindi (*Cinnamomum, tamala* Nees and Eberm), Tarmas (*Lupinus albus*).
7. Munzijat wa Mushilat (Concoctive and purgatives)-Maghz-e amaltas (*Cassia fistula*), Sapistan (*Cordia dichotoma*).
8. Munzij wa mushile Balgham advia (Concoctive and purgatives of phlegm): Khatmi (*Althoea officinalis*), Arusa (*Adhatoda vesica*), Parsyaushaan (*Adiantum capillus*), Sapistaan (*Cordia latifolia*), Injeer (*Ficus carica*), Aslessoos (*Glycerrhiza glabra*), Gauzaban (*Borage officinalis*).
9. Munzij wa Mushile Sauda advia (Concoctive and purgatives of black bile): Ustukhuddus (*Lavendula steochus*), Aftimoon vilayti (*Cuscuta epithymum* Linn.), Gauzaban (*Borage officinalis*), Unnab (*Zizphus sativa*), Shahtra (*Fumeria officinalis*), Badranjboya (*Mellisa officinalis*), Sapistan (*Cordia latifolia*), Badyan (*Foeniculum vulgare*), Maghz Jamal gota (*Croton tiglium* Linn.), Shahme Hanzal (*Citrullus colocynthis* Schrad.), Halela Siyah (*Terminalia chebula*), Turbud (*Ipomea turphtum*), Ghariqoon (*Agaricus alba* Linn.).
10. Muhallilat advia (Resolvent drugs). kasni (*Cichorium intybus*), Baboon (*Matricaria chamomilla*) baranjasif (*Artemisia vulgaris*), Marzanjosh (*Oliganum vulgare* Linn.)
11. Ilaj bil Tadabeer (Regimenal therapies): Venesection (Fasad) and leeching (application of leeches): Before menstruation venesection of Rage Safin can be done. Cupping of lower limb near ankle is also advisable.
12. Abzan (Sitz bath): With decoction of several drugs individually like, Baranjasaf (*Artemisia vulgaris*) and Babuna (*Matricaria chamomilla*), Murmuki (*Commiphora myrrh*), Saleekha (*Cinnamomum cassia*), Marzanjosh (*Oliganum vulgare* Linn.), Podina (*Mentha arvensis*), Izkhar (*Andropogon jawarancusa*), Qust (*Saussurea lappa*), Akleelul Mulk (*Trigonella uncatu*)
13. Humool (Pessary): by, Zaravand mudahraj (*Aristolochia rotunda*), Chiraita (*Swertia cheraita*), Podina (*Mentha arvensis*), Afsanteen (*Artemisia absinthium*) along with honey.
14. Zimad (Paste): Zimad-e-Izkhar (*Andropogon jawarancusa*).
15. If the cause is leucorrhoea then Kushta sadaf, Kushta Marwareed, Majoon Suparipak, Majoon Mooslipak is indicated.

Some herbal drugs, which are effective in spasmodic dysmenorrhoea

1. Balcharea (*Nardostachys jatamansi*)
2. Saunf (*Foeniculum vulgare*)
3. Lehsun (*Allium sativum*)
4. Qust (*Saussurea lappa*)
5. Hilteet (*Ferula asafoetida*)

6. Izkhar (*Andropogon jawarancusa*)
7. Asrol (*Rauwolfia serpentine*)
8. Siyah mirch (*Piper nigrum*)

Some herbal drugs, which are effective in congestive dysmenorrhoea

1. Babuna (*Matricaria chamomilla*)
2. Kasus (*Cuscuta reflexa*)
3. Podina (*Mentha arvensis*)
4. Dalchini (*Cinnamomum zeylanicum*)
5. Tarmas (*Lupinus albus*)
6. Hasha (*Thymus serpyllum*)
7. Abhal (*Juniperus communis*)

Compound formulations used in Unani medicine

1. Habbe Mudire Haiz
2. Safoof-e-Mudire Haiz
3. Dawa Mudire Haiz
4. Dawae Ussurutams
5. Tiryaqe farooq
6. Dawae Mudir

Pharmacological studies

- Gupta *et al.* (1962) conducted a study on 'Effect of *Nardostachys jatamansi* and *Rhus succedanea* against constrictor responses of histamine, acetylcholine and serotonin on smooth muscles.'
- Moderen Nejad and Asadipour (2006) conducted a 'Comparative study of the effectiveness of fennel and mefanamic acid and the result were found that 80% of girls in the m.a group, 73% girls showed complete pain relief'.
- Ostad *et al.* (2001) conducted 'The effect of fennel essential oil on uterine contraction as a model for dysmenorrhea, pharmacology and toxicology study'.
- Aqel *et al.* (1991) had conducted 'Direct relaxant effects of garlic juice on smooth and cardiac muscles'.
- Gilani *et al.* (2007) conducted study on 'Presence of cholinergic and calcium antagonist constituents in *Saussurea lappa* explains its use in constipation and spasm'.
- Fatehi *et al.* (2004) conducted the study of 'Antispasmodic effect of *Ferula asafoetida* gum extract'.
- Abdel Moneim *et al.*, (1969) conducted study as 'Constituent of local plants, the antispasmodic principles in *Cymopogon proximus*'.
- Vyshtakalyuk *et al.* (2006) conducted 'Effect of pectin substances on contractile activity of the uterine myometrium in rats'.
- Naseri and Yahyavi (2008) conducted study on 'Antispasmodic effect of *Piper nigrum* fruit hot water extract on rat ileum'.
- Forster *et al.* (1980) reported 'The antispasmodic activity of 2.5 and 10.0 mL/L of alcoholic extracts of certain drugs like *Melissa officinalis*, *Rosmarinus officinalis*, *Mentha piperita*, *Matricaria chamomilla*, *Foeniculum vulgare*, *Carum carvi* and *Citrus aurantium*'.

- Suresh *et al.* (2011) reported 'The In vitro anti-inflammatory and anti-cancer activities of *Cuscuta reflexa* Roxb'.
- Gordien *et al.* (2009) reported 'Antimycobacterial terpenoids from *Juniperus communis* L. (Cupressaceae)'.
- Lampart-Szczapa *et al.* (2003) reported 'The chemical composition and antibacterial activities of lupin seeds extracts. The results suggest that inhibition of test bacteria growth depended mainly upon the content of the total phenolic compounds'.
- Meades *et al.* (2010) reported 'The constituents of cinnamon inhibit bacterial acetyl CoA carboxylase'.
- Coutinho *et al.* (2008) reported 'The enhancement of the antibiotic activity against a multi-resistant *Escherichia coli* by *Mentha arvensis* L. and chlorpromazine'.

## Conclusion

Dysmenorrhoea is a most common problem among young females. The condition is mentioned in classical Unani literature under different names. While searching the Unani literature, there are many overlapping conditions, which may mimic to this disorder. The etiopathogenesis of the disease and the treatment beside regimental therapy and the diet have been mentioned in length in classical texts. However, on the other hand, NSAIDs, OCPs, and other conventional methods are associated with lots of toxicities and adverse effects. Therefore, Unani system of medicine might play an important role as it contains many safe and effective medicinal herbs, various modes of ilaj-bil-tadabeer and other dietary recommendations prescribed by the famous and experienced Unani physicians to treat various disorders. It is the need of hour that efficacy of treatment has to be tested on scientific parameters.

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Dysmenorrhoea: Contemporary Medicine point of view. The various causes of Dysmenorrhoea described under. contemporary system of medicine are like environmental factors. causing nervous tension, general ill health, faulty outlook, hormonal imbalance, psychogenic cause, imbalance of. autonomic nervous system, intrauterine contraceptive device, stenosis at internal Os, unequal development of mullerian ducts

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