

**CLINICAL CONSIDERATION RELATED TO DYSMENORRHEA W.S.R. TO ROLE OF
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Article Received on 20/05/2021

Article Revised on 10/06/2021

Article Accepted on 30/06/2021

ABSTRACT

Dysmenorrhea is one of the most prevalent medical disorders of women reproductive system affecting almost eighty percent of women with regular menstruation. It is defined as painful menstruation associated with abdominal cramps, backache, nausea, vomiting, stiffness in thighs, etc. Pain usually lasts for first few days of the periods. Sometimes it can be severe enough to hinder with the daily activities. Menstruation usually brings uncomfortable symptoms such as mild cramping and fatigue, anxiety etc. Management of Dysmenorrhea in generally done by NSAIDs, oral contraceptive drugs, etc. but females can show contraindications to such medications. Therefore, alternative medication through natural drug therapy, local heat therapy, acupuncture, etc. proved to be effective in management of dysmenorrhea. The present article represents detailed information of various natural drugs used in the management of the disease Such as mint, ginger, cinnamon, chamomile, cumin, etc.

KEYWORDS: Dysmenorrhea, Menstruation, Pain, Natural drugs, Mint, Ginger, Cinnamon.**INTRODUCTION**

Dysmenorrhoea is derived from Greek word 'Dys' meaning difficult or painful; 'mens' meaning month and 'rrhoea' meaning flow. It is a medical condition which is characterized by severe uterine pain in lower abdominal or pelvic area before or during menses which can limit normal activities or require medication.^[1] Primary dysmenorrhea is a condition related to myometrial contractions which are induced by prostaglandins secreted by endometrium, which results in uterine ischemia and pain. It is the most common gynecologic complaint among young females.^[2] According to studies, the prevalence of Menstruation-associated symptoms is seen in nearly fifty to ninety percent of women.^[3] In five to twenty percent of women, severe dysmenorrhea prevents women from participating in usual activities. Dysmenorrhic women may face complex alterations in hormonal patterns throughout the cycle.^[4] Non-steroidal anti-inflammatory drugs (NSAIDs) and oral contraceptives are widely used as in treating women with primary dysmenorrhea. Due to the severe side effects of

such medication, usage of complementary and alternative medicine is increasing throughout the world.

Menstruation is the process of cyclic flow of blood from the uterus through the cervix and out through the vagina during the puberty. It is the process of degeneration of endometrial lining of uterus and removal of the same through vagina which occurs at regular interval.^[5] This is a normal part of a woman's life which makes the uterine lining prepared for pregnancy with the help of hormones. The average menstrual cycle is twenty eight days long. It can also range from 21 to 35 days in adults and from 21 to 45 days in young teen. ^[6] This cyclic physiologic uterine bleeding due to shedding of the endometrium is the result of interplay of hormones mainly through hypothalamo-pituitary-ovarian-endometrial axis.

Classification of Dysmenorrhoea

- Primary dysmenorrhoea is condition of cramping and pain in lower abdominal region, pelvic areas; thighs and back caused by menstruation. The cramps

occur due to contractions in the uterus and are usually more severe during heavy bleeding. It usually affects more than fifty percent of women and is quite severe in about ten percent cases.

- Secondary dysmenorrhea is menses-related pain accompanied by medical or physical pathology such as endometriosis, adenomyosis, STD, pelvic inflammatory disease, uterine fibroids, etc.

Etiopathogenesis of spasmodic dysmenorrhea

It is reported that young girls with anxiety has low pain threshold and thus they suffer more from primary dysmenorrhea. Muscular in coordination occurs due to an imbalance in the autonomic nervous control of muscles. Sometimes, cervical obstruction can also cause severe pain. In case of uterine hypoplasia, uterus myometrium contains an excessive amount of fibrous tissue disturbing the normal contraction pattern leading to difficulty in menstrual flow causing severe pain. Hormonal imbalance and excess prostaglandin can cause spasm of uterine muscles during menses, thus narrowing the small blood vessels of uterus causing shutdown of oxygen supply to uterus resulting into menstrual cramp.^[7] Some Factors causing dysmenorrhea are young age, anxiety, stress, imbalance BMI, depression, family history, menarche at a young age, smoking, menorrhagia, etc.

Pathogenesis of Dysmenorrhea

During menstrual cycle, the endometrium thicken to get prepared for pregnancy. After ovulation, if the ovum is not fertilized and there is no pregnancy, then the thickened uterine tissue is not needed and it gets shed. Molecule such as prostaglandins and inflammatory mediators in the uterus makes the uterus contract.^[8] Due to the contraction of uterine muscles, the blood supply to the endometrium gets restricted, thus making endometrium to break down and dies. These uterine contractions continue to pass the old, dead endometrial tissue out of the body through the vagina. These contractions and the resulting oxygen scarcity in the tissues are together responsible for the pain during menstruation.^[9]

Symptoms of Dysmenorrhea

- Pain in lower abdomen, pelvic area, thighs and back. Pain can start before or during menses and it can be constant in nature. The starting hours are considered as the most painful.
- Clots are passed in the menstrual blood
- Nausea, vomiting, headaches, constipation, dizziness, fainting, fatigue, tender breasts etc.^[10]

Natural drugs for Dysmenorrhea

Medicinal herbs are found to be major source of dysmenorrheal drugs. Their mono and poly-herbal preparations have been used to treat various disorders. They can be used clinically in the form of decoction, tincture, tablets and capsules.

- **Cinnamomum zeylanicum** - Cinnamon bark is hot and aromatic herb consisting of sugar, essential oil, tannin, mucilage, resin, calcium oxalate, etc. It can be taken as herbal tea formula in dose of 2–4 ml, three times a day. It has antispasmodic effect due to essential oil and tannin.^[11] It helps in pain relieving during menstrual cramps.
- **Foeniculum vulgare** - Add fennel seeds and honey to a cup of boiling water honey and drink it three days before the expected date. It contains anethole which provides anti-spasm effect. It is found to be effective in reducing the severity of dysmenorrhea.
- **Ginger (Zingiber officinale)** - It can be taken as a fresh, powder or decoction by boiling it in water. It provides relief from pain just like mefenamic acid or ibuprofen. It helps to pacify the menstrual pain and cramps by decrease the levels of prostaglandins.^[12]
- **Mint (Mentha longifolia L.)** - Mint tea helps in reducing the associated pain of dysmenorrhea.^[24] It has antispasmodic effect on smooth muscles which inhibits induced contractions by blocking calcium channels.^[13]
- **Puff Ball (Bovista)** - It helps in curing menstrual irregularity, ovarian cysts, diabetes mellitus, etc.
- **Calendula oil** - It is obtained from marigold flowers. It makes axons of nerve cells short that prevent messages transmission from nerve cells of uterus to the brain. This delays the transfer of pain messages from the brain to the uterus.^[14]
- **Buckwheat (Fagopyrum esculentum)** - It is an isolated flavonoid that helps to control bleeding and reduces capillary fragility.
- **Parsley (Pteroselenium hortense)** - It is consumed in form of tea by mixing fresh leaves in boiling water. It is beneficial in regulating menstrual cycle and relieving pain.
- **Coriander (Coriandrum sativum)** - It is considered as very good remedy for dysmenorrhea. It is known to reduce dysmenorrheal pain.^[15]
- **Chamomile (Matricaria chamomilla)** - It is rich in anti-inflammatory and antispasmodic properties. It has mild sedative nature which helps to reduce stress, anxiety and induces calmness in the body. Chamomile drink should be consumed during the week before menstrual period.^[16]
- **Achillea Willhemssii** - It has anti-prostaglandin and anti-inflammatory effect due to the inhibition of arachidonic acid metabolism.
- **Ananas Comosus (Pineapple)** - It is helpful in pacifying inflammatory reactions. Pineapple consists of Bromelain that acts as a protease inhibitor therefore reduces irritation, cramps and bloating in menstruation.^[17]
- **Cramp Bark (Viburnum opulus)** - It is a very good uterine sedative for relieving uterine and abdominal cramps. These sister herbs such as Cimicifuga racemosa, anise seed (Pimpinella anisum), Cramp bark shows amazing pain relieving

action thus provides relief in pain and muscle spasm in the uterus.^[18]

- **Black Cohosh (*Actea racemosa*)** - It has anti-inflammatory and antispasmodic effect in both the smooth muscles and skeletal muscles that radiates the pain to lower back and thighs. It can be taken in form of tea or capsule. It has various healing properties such as rheumatoid arthritis, sore throat, joint inflammation, menstrual cramps, labour pain, etc.
- **Agrimony (*Agrimonia pilosula*) and shepherd's purse (*Capsella bursa-pastoris*)** – These are best herbs to reduce bleeding and to treat profuse menstruation by coagulating blood. Shepherd's
- purse has urinary antiseptic and anti-haemorrhagic properties helpful in mild menorrhagia and metrorrhagia.^[19]

CONCLUSION

Dysmenorrhoea is a chronic medical condition that generally affects young women. Based on a high degree of safety/ efficacy, long historical uses, numerous herbs can be recommended for primary dysmenorrhoea. Allopathic medicines have various side effects. Therefore medicinal plants are found to be best alternative for the treatment of menstrual problem based on a high degree of safety, efficacy and long historical uses. There are various natural drugs which possess anti-spasmodic and anti-inflammatory properties. Many herbs can be combined with conventional and supplemental approaches to resolve the primary dysmenorrhea condition.

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