

Dysmenorrhea Summary Sheet

Background

Dysmenorrhea is a major cause of work and school absenteeism, as well as a significant reason for regular use of analgesics and NSAIDs. Estimates of adolescent girls and women experiencing dysmenorrhea range from 45% to 95% internationally, with debilitating to incapacitating dysmenorrhea occurring in approximately 7% to 15% of women. Dysmenorrhea is more prevalent in smokers.

Definition

- Dysmenorrhea, "difficult menstruation," refers to painful menstruation. It is characterized by pelvic discomfort and menstrual cramps of varying intensity, from slightly annoying to debilitating, and is frequently accompanied by additional symptoms. Dysmenorrhea is markedly cyclical, with discomfort occurring just prior to (12 to 24 hours before) or during (first 48 to 72 hours of) the menstrual period. It often improves after a full-term pregnancy.
- Dysmenorrhea is categorized as either primary or secondary. Primary dysmenorrhea is pain in the absence of organic pathology. It mostly affects young women, has an onset after the beginning of ovulatory menstrual cycles (usually just prior to and through the first 12 to 72 hours of menses), and

typically improves over time. Secondary dysmenorrhea is associated with underlying pathology, for example, endometriosis or ovarian cysts. It occurs in the second to fourth (typically in the third and fourth) decades of life, may occur during, before, or after menses, presents with painful periods that have often become increasingly severe, and typically worsens over time. Primary and secondary dysmenorrhea are diagnosed by symptom picture, history of onset and occurrence, and the exclusion of underlying structural or pathologic abnormalities.

Causes

- Primary dysmenorrhea is caused by myometrial contraction induced by excessive cyclic prostaglandin PGF2 α production (as much as seven times more PGF2 α than asymptomatic women) in the secretory endometrium. Excessive prostaglandin also leads to increased intrauterine pressure.
- Concomitantly, this same form of prostaglandin causes smooth muscle contractility in other muscles, leading to other symptoms associated with dysmenorrhea.
- The etiology of secondary dysmenorrhea is the presence of underlying pelvic pathology.

Symptoms

- Pelvic discomfort and menstrual cramps, that may be wave-like or constant, and which may radiate to the lower back, legs, and vulva, accompanying menstruation

- Pelvic heaviness, fullness, and aching that is typically worse when upright and active, and remits somewhat with rest and reclining postures, accompanying menstruation
- Backache, headache, dizziness, nausea, vomiting, and diarrhea may also accompany menstruation

Treatment

Conventional medicine approach: prostaglandin synthetase inhibitors (PGSIs), NSAIDS, and oral contraceptives (OCs)

Functional and integrative medicine approach: Start with root causes - inflammation, hormone balance, environmental toxins/elimination, nutrients, beliefs/stress/sleep. A multifactorial approach incorporates an anti-inflammatory, Mediterranean style diet, reduction in exogenous estrogens, and improvement in hepatic clearance and elimination.

Diet:

- In human studies, a higher consumption of fish, eggs, fruit and a lower consumption of wine was correlated with a lower frequency of dysmenorrhea; intake of fish oil seemed to have a positive effect on pain symptoms of dysmenorrhea; and a low-fat vegetarian diet was associated with a reduction in dysmenorrhea duration and intensity.
- Salmon, tuna, and halibut contain linolenic acid, which helps to relax the muscles by manipulating production of the PG1, 2, and 3 series to increase the anti-inflammatory 1 and 3 series and decrease the pro-inflammatory 2 series.
- Seeds that contain linoleic acid such as pumpkin, flax, sesame, and sunflower also increase PGE3 levels.

Sleep:

- Not getting enough good quality sleep leads directly to inflammation due to disruption in circadian rhythm and our cortisol cycles and can increase the amount of period pain women experience and reduce their ability to cope with it.

Botanicals:

- Lavender essential oil and other EO aromatherapy - aids in overall relaxation and may be used to address dysmenorrhea and associated discomforts.
- Cramp bark, black haw, and black cohosh - considered among the most important and reliable uterine antispasmodics and tonics by herbalists, midwives, and naturopathic physicians. Black cohosh is approved by the German Commission E for the treatment of premenstrual complaints and dysmenorrhea.
- Motherwort - has also been used traditionally for dysmenorrhea, has demonstrated uterine spasmolytic and sedative effects, and is considered a uterine tonic.
- Ginger root - used both internally and topically as a warming circulatory stimulant and anti-inflammatory in the treatment of dysmenorrhea. Its positive effects in relieving nausea have been demonstrated, making it especially useful when there is dysmenorrhea accompanied by nausea and vomiting. The dose is 500 mg (ginger root powdered in capsules) three times/day, though up to 3,000 mg/day is considered safe and is recommended in divided doses. Ginger root can also be taken as a hot tea, tincture, fomentation, or hot bath.
- Cinnamon - has been found to be similarly effective for reducing pain, nausea, and vomiting with primary dysmenorrhea.
- Fennel seed - used in traditional remedies for treatment of dysmenorrhea, a usage that might be related to the antispasmodic effects of FEO.

- Peony and licorice - peony is an important herb in TCM for the treatment of dysmenorrhea and muscle cramping. The TCM herbal medicine shakuyaku-kanzo-to (consisting of an equal amount each of peony and licorice) may exert its action against dysmenorrhea through preventing prostaglandin production.
- Peppermint oil (capsules)
- Valerian
- Fenugreek
- Chamomile
- Vitex
- Cannabis - limited research data, but strong historical and self-medication data.

Aviva's Herbal Formulae:

For acute pain during menses (can be taken for several days prior to anticipated onset of menses), combine equal parts of:

- Cramp bark or black haw
- Wild yam
- Motherwort
- Black cohosh
- Ginger

Total 100 mL

Dose: 2 to 4 mL tid. For severe cramping pain, take the above tincture every 2 hours; add 1 mL Jamaican dogwood (*Piscidia piscipula*) every 2 hours, not to exceed six doses per day, or more than 2 days.

For severe, acute cramps, combine equal parts of:

- Cramp bark or black haw
- Jamaican dogwood
- Cordyialis
- Pulsatilla

Total: 100 mL

Dose: Take 1.5 mL every 20 minutes for six doses, or 2 mL every 30 minutes for four doses to relieve acute pain. This can be repeated twice daily at least 4 hours apart, but should not exceed this dose.

Supplements:

- Vitamin D
- Thiamine
- Vitamin E (Note: Vitamin E can increase bleeding time, so use should be monitored in patients with blood clotting disorders or those taking anticoagulant medication)
- Calcium
- Calcium + Vitamin D
- Magnesium - a cofactor in delta-6 desaturase involved in anti-inflammatory prostaglandins (PGE1) and exerts a relaxing effect on skeletal and smooth muscle cramping. The recommended dose is generally 300 to 600 mg three times daily for several days prior to the onset of menses.
- EFAs

Mind-body and manual therapies:

- Heat and touch
- Acupuncture
- Acupressure
- Aromatherapy abdominal massage
- Arvigo pelvic massage - though studies are lacking, I often recommend this technique (with a certified practitioner) in my medical practice
- Restorative yoga
- Cognitive-based pain relieving approaches (meditation, relaxation, visualization)

Additional Information/Clinical Pearls

When creating differential diagnosis, remember to rule out the following conditions:

- Bowel obstruction
- Constipation
- IBS
- Intestinal ulcers
- Renal inflammatory and infectious disorders
- Renal colic
- Ovarian cysts
- PID
- Endometriosis
- Uterine fibroids
- Miscarriage
- UTI
- Musculoskeletal disorders