Up to 50% of all women suffer from dysmenorrhea, or painful menstruation. It is the most common gynecological disorder in women.\textsuperscript{i} The prevalence of dysmenorrhea is highest in adolescent women, with estimates ranging from 20 to 90 percent.\textsuperscript{ii,iii,iv,v,vi} About 15 percent of adolescent girls report severe dysmenorrhea, and it is the leading cause of recurrent short-term school absenteeism in adolescent girls in the United States. It may also affect activities of daily living (ADLs) during menses, including work attendance, social life or exercise regimens. It has been estimated that between 100-600 million work hours are lost every year as a result of menstrual distress complications (Gauntt 2003). Most adolescents self-medicate with over-the-counter (OTC) medicines, such as non-steroidal anti-inflammatory drugs (NSAIDs) and few consult a physician about dysmenorrhea.

**Differential Diagnoses**  
Secondary dysmenorrhea (including endometriosis, adenomyosis, uterine leiomyomata, or chronic pelvic inflammatory disease)

**Subjective Findings and History**

- Increased Risk Factors/Predisposition: presentation at age less than 30 y.o, body mass index (BMI) less than 20, menarche before age 12, longer cycles/duration of bleeding, irregular or heavy menstrual flow, premenstrual symptoms (PMS), history of pelvic inflammatory disease (PID), sterilization, history of sexual assault, and heavy smoking\textsuperscript{vii}
- Reduced Risk: use of oral contraceptives (OCPs), fish intake, physical exercise, married or in a stable relationship, and higher parity.\textsuperscript{vii}
- History of painful menses
- Quality, location, timing of pain
- May be aggravated or relieved by pressure or by temperature (particularly cold)
- Menses characteristics (length, timing)
- Color, consistency, quantity of blood
- Accompanying symptoms depending on syndrome differentiation may include: restlessness, dizziness, mental depression, palpitations, distending pain in breast, costal or hypochondria region, aversion to cold, pallor, blurred vision, dry skin, nausea, diarrhea, fatigue, headache, and a general sense of malaise

**Pathophysiology**  
Dysmenorrhea is characterized by recurrent, cramping or lower abdominal pain and is thought to be caused by the release of prostaglandins in the menstrual fluid, which causes prolonged uterine contractions that decrease blood flow to the myometrium resulting in ischemia and pain.\textsuperscript{viii}
Vasopressin also may play a role by increasing uterine contractility and causing ischemic pain as a result of vasoconstriction. In the absence of any underlying pelvic disease, clinically, the disorder is known as primary dysmenorrhea. Secondary dysmenorrhea is caused by pelvic organ pathology (such as uterine leiomyomata or endometriosis). This pathway will focus on primary dysmenorrhea, but some of the information is applicable to symptoms of secondary dysmenorrhea.

It is hypothesized that mechanical joint dysfunction of the lower spine and pelvis may cause the sympathetic nervous system to vasoconstrict the blood vessels supplying pelvic viscera, leading to pain. It is also hypothesized that pain from dysmenorrhea is referred pain from musculoskeletal structures that share pelvic nerve pathways (Proctor 2004).

**Objective Findings**
- Motion palpation to identify lumbosacral and sacroiliac joint dysfunction. There is a strong correlation between SI joint motion dysfunction and dysmenorrhea (Genders 2003)
- Soft tissue palpation to identify increased tone and tenderness of the lumbar and pelvic musculature

**Assessment**
**Physical Examination**
Complete screening physical including abdominal and pelvic exam to rule out other pathology

**Laboratory Studies/Imaging**
Noninvasive laboratory tests contribute little to the evaluation of women with dysmenorrhea 1st time mentioned—what does it mean?, but can uncover pathology associated with secondary dysmenorrheal. These tests include transvaginal pelvic sonography, CA-125, and sexually transmitted infection (STI/STD) testing.

**Plan**
**Passive Care (Acupuncture)**
- If Pathogenic Factor involved, clear first. Treat Branch two (2) weeks prior to menses, treat Root two (2) weeks after menses.
- Acupuncture according to TCM Syndrome differentiation General points for shi conditions include: Li3, CV3, ST29, SP10, LL4, BL32, Ki4, ST28, Shi Qi Zhui Xia General points for Xu conditions include: CV4, BL20, BL18, BL23, ST36, SP6 Point prescription should be modified to reflect further differentiation
- Herbs: General formulas for Shi conditions include: Xiao Yao San, Ge Xia Shu u Tang, Shi Xiao San General formulas for Xu conditions include: Dang Gui Shao Yao San, Ba Zhen Yi Mu Tang, Sheng Yu Tang
- Modify or change formula according to further differentiation of Syndrome/Treatment Principles
- Acupuncture

**Active Care (Acupuncture)**
- Rest if Xu Syndrome or heavy bleeding
- No cold foods or drink during menses
- Eat warming foods if Cold Syndrome
- Application of heat if Cold Syndrome
• No damp, warming foods or drinks if Dampheat condition
• Limit exposure to cold/damp environment
• Other diet modifications according to Syndrome

Treatments (ND)
Nonsteroidal anti-inflammatory agents (NSAIDs), such as phenylproprionic acid derivatives or fenamates and hormonal oral contraceptive pills (OCPs) represent the mainstays of pharmacologic therapy\textsuperscript{xxv,xxvii,xxviii}. Injectable depot medroxyprogesterone injections (DMPA) and levonorgestrel-releasing intrauterine device (LNG-IUS), such as the Mirena IUD are also effectively used\textsuperscript{xxviii,xxix}. There are additional treatments, which may help prevent or treat pain during menstruation. In addition, ovulation can be delayed in some women taking NSAIDs and alternatives may be sought of they are seeking pregnancy.\textsuperscript{xix,xx,xxi}

- Application of heat to lower abdomen\textsuperscript{xxii}
- Massage with aromatic essential oils\textsuperscript{xxiii}
- Herbal analgesics and anti-spasmodics
- Hot-hip bath\textsuperscript{xxiv}
- Topical heat\textsuperscript{xxv,xxvi}
- Microwave diathermy\textsuperscript{xxvii}
- Low-fat and/or vegetarian diet\textsuperscript{xxviii,xxix}
- Avoidance of alcohol
- Vitamin E vitamin (small trial: 500 units per day or 200 units bid, beginning two days before menses and continuing through the first three days of bleeding,)\textsuperscript{xxx,xxxi,xxxii,xxxiii,xxxiv}
- Vitamin B\textsubscript{1}
- Magnesium\textsuperscript{xxxv}
- Krill oil or Fish oil (small trial: 1080 mg eicosapentaenoic acid (EPA), 720 mg docosahexaenoic acid (DHA) \textsuperscript{qd})\textsuperscript{Error! Bookmark not defined.},\textsuperscript{xxvi}
- Japanese herbal combinations (small trial)\textsuperscript{Error! Bookmark not defined.}
- Chinese herbal medicine (CHM) (promising evidence in systematic review)\textsuperscript{xxviii}
- Increased physical activity\textsuperscript{xxviii,xxix}
- Behavioral interventions (desensitization based procedures: hypnotherapy, imagery; coping strategies and attempts at modification of pain response: biofeedback, electromyographic training, Lamaze exercises, and relaxation training) \textsuperscript{xl}
- I.V. Therapy (Magnesium and B\textsubscript{6}) or Meyer’s Cocktail
- Ginger (Zingiber officinale)\textsuperscript{xli,xlii}
- Bromelain (2,000 mcu/g), 300-500 mg, 3-4 times daily on empty stomach (acute treatment)
- Niacin, 100 mg every 2-3 hours (acute treatment). Addition of vitamin C and flavonoids may enhance the effectiveness of niacin.
- Transcutaneous electrical nerve stimulation (TENS)\textsuperscript{xlii,58,xliv, xlv}
- Low amplitude spinal manipulation\textsuperscript{xlvi}
- Reflexology\textsuperscript{xlvii}
- Homeopathy\textsuperscript{xlviii}
- Acupressure\textsuperscript{xliv,li,lii,liii}
- Acupuncture\textsuperscript{lix,lx,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,lix,li...
Treatment (DC)
Chiropactic manipulation of the lumbosacral and sacroiliac joints is correlated with reduced self-reported abdominal and lower back pain from dysmenorrhea during the course of treatment (Holtzman 2008). Manipulation is a safe, effective non-pharmacological alternative for the relief of pain and distress from primary dysmenorrhea (Kokjohn 1992).

- Increased spinal mobility may improve pelvic blood supply, thereby facilitating pain relief (Proctor 2006)
- Spinal adjustments may reduce menstrual pain and discomfort by decreasing the transmission of pain via somatovisceral reflex pathways (Moosa 2003)
- A significant reduction in plasma levels of a prostaglandin metabolite occurred in patients that received spinal manipulation and a sham manipulation, suggesting benefit from a placebo effect associated with the intervention (Kokjohn 1992)
- Spinal manipulation reduces activity of lumbar erector spinae muscles that coincides with reduced low back pain and menstrual cramps (Boesler 1993)

Length of Treatment (Acupuncture)
Estimated duration of care: 1x weekly for at least three (3) cycles. If patient is still symptomatic and treatment progress is steady after 3 cycles, treatment may continue 2x monthly for 6 months. Complicated conditions may take longer to resolve, i.e. damp heat.

Referral Criteria
If patient worsens or does not improve with treatment within three cycles and is not considered an acute emergency (such as PID or acute abdomen) refer to specialist (gynecologist) for further testing/differentiation (e.g. laparoscopy).

Resources for Clinician


Resources for Patients
MedlinePlus. Painful menstrual periods. MedlinePlus will direct you to information to help answer health questions. MedlinePlus brings together authoritative information from NLM, the National Institutes of Health (NIH), and other government agencies and health-related organizations. http://www.nlm.nih.gov/medlineplus/ency/article/003150.htm

Evidence


Clinical Pathway Feedback

CHP desires to keep our clinical pathways customarily updated. If you wish to provide additional input, please click on the email address listed below and identify which clinical pathway you are referencing. Thank you for taking the time to give us your comments.

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