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Dysmenorrhea

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Dysmenorrhea may begin soon after menarche, where it often improves with age, or it may originate later in life after the onset of an underlying causative condition.

- Dysmenorrhea is very common, and it may be severe enough to interfere with daily activities in up to 20 percent of women.

- Dysmenorrhea is more likely in women who smoke, and in women with an earlier age at menarche or longer duration of menstruation.

Nonsteroidal anti-inflammatory drugs reduce moderate to severe pain in women with primary dysmenorrhea compared with placebo, but we do not know whether any one nonsteroidal anti-inflammatory drug is superior to the others.

- Simple analgesics such as aspirin and paracetamol may reduce pain in the short

term, although few studies have been of good quality.

- The Chinese herbal remedy toki-shakuyaku-san and an Iranian herbal remedy made from saffron, celery, and anise may reduce pain compared with placebo. We do not know whether Chinese herbal remedies are beneficial compared with placebo, but there is limited evidence that they may be effective compared with other treatments for dysmenorrhea.

- Thiamine and vitamin E may reduce pain compared with placebo in young women with primary dysmenorrhea.

Combined oral contraceptives may be more effective at reducing pain in women with primary dysmenorrhea; however, few studies have been of good quality.

Clinical Questions

What are the effects of treatments for primary dysmenorrhea?

Beneficial	Nonsteroidal anti-inflammatory drugs (other than aspirin)
Likely to be beneficial	Acupressure
	Aspirin and paracetamol
	Behavioral interventions (relaxation)
	Contraceptives (combined oral)
	Herbal remedies other than toki-shakuyaku-san
	Thiamine
	Toki-shakuyaku-san (herbal remedy)
	Topical heat (about 102°F [39°C])
	Transcutaneous electrical nerve stimulation (high-frequency stimulation only; effects of low-frequency stimulation remain unclear)
	Vitamin E
Unknown effectiveness	Acupuncture
	Fish oil
	Magnets
	Progestogens (intrauterine)
	Vitamin B ₁₂
Unlikely to be beneficial	Spinal manipulation
Likely to be ineffective or harmful	Surgical interruption of pelvic nerve pathways

Topical heat (about 102°F [39°C]) may be as effective as ibuprofen and more effective than paracetamol at reducing pain.

- High-frequency transcutaneous electrical nerve stimulation (TENS) may reduce pain compared with sham treatment, but seems to be less effective than ibuprofen.

- Acupressure may be more effective than sham or no treatment at relieving dysmenorrhea.

- Spinal manipulation may be no more effective than placebo at reducing pain after one month in women with primary dysmenorrhea.

- Relaxation may be better than no treatment at relieving dysmenorrhea.

- We do not know whether acupuncture, fish oil, vitamin B₁₂, magnets, or intrauterine progestogens reduce dysmenorrhea.

- Surgical interruption of pelvic nerve pathways is not beneficial in treating dysmenorrhea, and may be associated with adverse effects including constipation.

Definition

Dysmenorrhea is painful menstrual cramps of uterine origin. It is commonly divided into primary dysmenorrhea (pain without organic pathology) and secondary dysmenorrhea (pelvic pain associated with an identifiable pathologic condition, such as endometriosis or ovarian cysts). The initial onset of primary dysmenorrhea usually occurs within six to 12 months after menarche, when ovulatory cycles are established. Pain duration is commonly eight to 72 hours and is usually associated with the onset of menstrual flow. Secondary dysmenorrhea can also occur at any time after menarche, but may arise as a new symptom during a woman's fourth and fifth decades, after the onset of an underlying causative condition. In this review we only consider studies of women with primary dysmenorrhea. However, the results may also be generalizable to women with secondary dysmenorrhea. Studies of women with endometriosis, adenomyosis, pelvic congestion, and fibroids may also examine dysmenorrhea/pain as an outcome.

Incidence and Prevalence

Variations in the definition of dysmenorrhea make it difficult to determine precise prevalence rates. Studies tend to report on prevalence in adolescent girls, and the type of dysmenorrhea is not always specified. Adolescent girls tend to have a higher prevalence of primary dysmenorrhea than older women, because primary dysmenorrhea can improve with age (see Prognosis). Secondary dysmenorrhea rates may be lower in adolescents, because onset of causative conditions may not yet have occurred. Therefore, the results from prevalence studies of adoles-

cents may not always be extrapolated to older women, or be accurate estimates of the prevalence of secondary dysmenorrhea. However, various types of studies have found a consistently high prevalence in women of different ages and nationalities.

One systematic review (search date 1996) of the prevalence of chronic pelvic pain, summarizing community and hospital surveys from developed countries, estimated prevalence to be 45 to 95 percent. A second systematic review of studies in developing countries (search date 2002) found that 25 to 50 percent of adult women, and about 75 percent of adolescents, experienced pain with menstruation, with 5 to 20 percent reporting severe dysmenorrhea or pain that prevents them from participating in their usual activities. A third systematic review and meta-analysis of prevalence rates among high-quality studies with samples representative of the general worldwide population (search date 2004) found that prevalence of dysmenorrhea was 59 percent (95% confidence interval, 49 to 71 percent). Prevalence rates reported in the United Kingdom were between 45 and 97 percent for any dysmenorrhea in community-based studies, and between 41 and 62 percent in hospital-based studies.

Etiology and Risk Factors

A systematic review (search date 2004) of cohort and case-control studies concluded that age younger than 30 years, low body mass index, smoking, earlier menarche (younger than 12 years), longer menstrual cycles, heavy menstrual flow, nulliparity, premenstrual syndrome, sterilization, clinically suspected pelvic inflammatory disease, sexual abuse, and psychological symptoms were associated with increased risk of dysmenorrhea.

Prognosis

Primary dysmenorrhea is a chronic recurring condition that affects most young women. Studies of the natural history of this condition are sparse. One longitudinal study in Scandinavia found that primary dysmenorrhea often improves in the third decade of a woman's reproductive life, and is also reduced after childbirth. We found no studies that reliably examined the relationship between the prognosis of secondary dysmenorrhea and the severity of the underlying pathology, such as endometriosis.

EDITOR'S NOTE: Paracetamol is called acetaminophen in the United States.

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Author disclosure: Pallavi Latthe, Rita Champaneria, and Khalid Khan are authors of several references used in this review.

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