Dysmenorrhea
Gynaecology seminar
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Dysmenorrhea
Dysmenorrhea (or dysmenorrhoea), cramps or painful menstruation, involves menstrual periods that are accompanied by either sharp, intermittent pain or dull, aching pain, usually in the pelvis or lower abdomen.
Painful menstruation affects approximately 50% of menstruating women, and 10% are incapacitated for up to 3 days. Painful menstruation is the leading cause of lost time from school and work among women of childbearing age.
This pain may precede menstruation by several days or may accompany it, and it usually subsides as menstruation tapers off.

Although some pain during menstruation is normal, excessive pain is not.
Dysmenorrhea refers to menstrual pain severe enough to limit normal activities or require medication. It may coexist with excessively heavy blood loss (menorrhagia).
Primary dysmenorrhea refers to menstrual pain that occurs in otherwise healthy women. This type of pain is not related to any specific problems with the uterus or other pelvic organs.
Secondary dysmenorrhea is menstrual pain that is attributed to some underlying disease process or structural abnormality either within or outside the uterus (for example, pelvic inflammatory disease, leiomyoma, endometriosis, adhesions, adenomyosis, uterine displacement, or a retroverted uterus).
Adenomyosis. Note thickened wall of uterus which can be mistaken for fibroids.
Abdominal pain, fever, chills
Pain with sex or pelvic exam
Caused by bacteria

Scarred/blocked fallopian tube
Pelvic abscess
Adhesions
Endometriosis is the most common cause of dysmenorrhea associated with a disease process and is frequently misdiagnosed.
Endometriosis is a common cause of secondary dysmenorrhea. In fact, approximately 24% of women who complain of pelvic pain are subsequently found to have endometriosis. This condition is often associated with infertility. If pain relief is the goal, medical options include hormonal contraception, danazol, progestational agents, and GnRH agonists.
The incidence of menstrual pain is greatest in women in their late teens and 20s, then declines with age. Some women experience increased menstrual pain in their late 30s and 40s as their endocrine systems prepare for menopause by decreasing hormone levels and thus fertility.
It does not appear to be affected by childbearing. An estimated 10 percent to 15 percent of women experience monthly menstrual pain severe enough to prevent normal daily function at school, work, or home.
Risk factors
The majority of women will suffer this degree of dysmenorrhea at least once during their reproductive years. Increased risk is associated with younger age, and past medical history of any of the conditions associated with secondary dysmenorrhea.
• **Primary:**
  - Nulliparity (having never given birth)
  - Obesity
  - Cigarette smoking
  - Positive family history

• **Secondary:**
  - Pelvic infection
  - Sexually transmitted diseases
  - Endometriosis
Primary Dysmenorrhea

Pathophysiology

Primary dysmenorrhea occurs during regular ovulatory cycles. Women with primary dysmenorrhea have increased activity of the uterine muscle with increased contractility and increased frequency of contractions.
Prostaglandins are released during menstruation due to destruction of the endometrial cells and the resultant release of their contents. Release of prostaglandins and other inflammatory mediators in the \textit{uterus} is thought to be a major factor in primary dysmenorrhea.
Prostaglandin levels have been found to be much higher in women with severe menstrual pain than in women who experience mild or no menstrual pain. Drugs which inhibit the production of prostaglandins, such as the non-steroidal anti-inflammatory drugs (NSAIDs) Naproxen, Ibuprofen and Mefenamic Acid.
can provide relief for the discomfort and other associated symptoms of excessive prostaglandin release, such as nausea, vomiting, and headache.

**Clinical Features**
The cramping associated with dysmenorrhea usually begins a few hours before the start of bleeding and may continue for a few days.
The pain is usually described as being in the lower abdomen, possibly radiating to the thighs and lower back. Other symptoms associated with primary dysmenorrhea are nausea and vomiting, fatigue, diarrhea, lower backache, and headache.
Other investigations help in diagnosis:

1) **Endocervical swab** for *chlamydia trachomatis* and *neisseria gonorrhoea* and high vaginal swab for other pathogens

2) **Ultrasound**

3) **Laparoscopy**

4) If history suggest a shermans syndrome or cervical stenosis, **hysteroscopy** can be used... These conditions are infrequent causes of dysmenorrhoea and their investigations should not be routine.
Treatment

1) Nonsteroidal anti-inflammatory drugs (NSAIDs), such as ibuprofen and naproxen, are very effective in the treatment of primary dysmenorrhea. Their effectiveness comes from their ability to inhibit prostaglandin synthesis.
However, many NSAIDs can cause gastrointestinal upset as a side effect. Patients who cannot take most common NSAIDs may be prescribed a cyclo-oxygenase-2 (COX2) inhibitor.
2) Oral contraceptives are second-line therapy unless a woman is also seeking contraception, then they would become first-line therapy.

Oral contraceptives are 90% effective in improving primary dysmenorrhea and work by reducing menstrual blood volume and suppressing ovulation.
It may take up to 3 months for the oral contraceptives to become effective. Norplant and Depo-provera are also effective since these methods often induce amenorrhea.
Alternative treatments

For the 10% of patients who do not respond to NSAIDs and/or oral contraceptives, or where use of oral contraceptives is not appropriate, a wide range of alternative therapies have been proven effective, including transcutaneous electrical nerve stimulation (TENS), omega-3 fatty acids, transdermal nitroglycerin, thiamine, and magnesium supplements.
Treating subluxations in the spine may cause the nerves leaving the spine to be less aggravated and so decrease symptoms of dysmenorrhea, as well as other symptoms such as chronic stomach aches and headaches.

*Overall there is no evidence to suggest that spinal manipulation is effective in the treatment of primary and secondary dysmenorrhea.*"
Acupuncture is used to try to treat dysmenorrhea and studies have shown that it "reduced the subjective perception of dysmenorrhea" (Jun 2004). However, the small number of studies leaves doubt about the effectiveness of acupuncture for gynaecological conditions.
Secondary Dysmenorrhea
Pathophysiology
The mechanisms causing the pain of secondary dysmenorrhea are varied and may or may not involve prostaglandins. Some causes of secondary dysmenorrhea are endometriosis, pelvic inflammation, leiomyoma, adenomyosis, ovarian cysts, and pelvic congestions.
Adnexal Cyst

hydrosalpinx

cyst

cyst
atrophic ovary

x bladder adherent to
Other causes of pain::: The presence of an IUD (intrauterine device) for contraception may also be a potential cause of menstrual pain, although they usually lead to pelvic pain only around the time of insertion. Some women also find that use of internally-worn menstrual products, such as tampons and menstrual cups, exacerbate menstrual cramps and pain.
Clinical Features

The symptoms of secondary dysmenorrhea vary with the underlying cause, but generally the pain associated with secondary dysmenorrhea is not limited to the time around menses as with primary dysmenorrhea. Also, secondary dysmenorrhea is less related to the onset of bleeding in menstruation, is seen in older women, and is associated with other symptoms like infertility.
Treatment
The most effective treatment of secondary dysmenorrhea is the identification and treatment of the underlying cause of the pain, although the relief provided by NSAIDs is often helpful.
The first line of treatment is medical (e.g., prostaglandin synthetase inhibitors, hormonal contraception, danazol, progestins)
If possible, the underlying disorder or anatomic abnormality is corrected, thus relieving symptoms. Dilation of a narrow cervical os may give 3 to 6 months of relief (and allows diagnostic curettage if needed). Myomectomy, polypectomy, or dilation and curettage may be needed. Interruption of uterine nerves by presacral neurectomy and division of the sacrouterine ligaments may help selected patients. Hypnosis may be useful
Thank you