Dysmenorrhoea

Definition:

Cyclic pain with menstruation that interferes with daily activities.

Prevalence:

Dysmenorrhoea is a very common complaint, experienced by 50% of women of reproductive age.

Classification:

Dysmenorrhoea can be classified as either primary (where there is no organic pathology) or secondary (where there is identifiable organic pathology as endometriosis).

Aetiology:

Primary dysmenorrhoea

The risk factors for primary dysmenorrhoea include:

* Duration of menstrual flow of more than 5 days.
* Younger than normal age at menarche.
* Cigarette smoking.
* increased body mass index (BMI).

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Primary dysmenorrhoea is associated with uterine hypercontractility and a high resting tone between contractions. During contraction endometrial blood flow is reduced and there will be ischaemia which result in colicky pain.

Prostaglandin and leukotriene levels are elevated in menstrual fluid and uterine tissue of women with dysmenorrhoea as are systemic levels of vasopressin.

Dysmenorrhoea improves after childbirth, and it declines with increasing age

Secondary dysmenorrhoea

Secondary dysmenorrrhoea may be a symptom of:

* Endometriosis
* Pelvic inflammatory disease
* Adenomyosis
* Asherman's syndrome
* menstrual outlet obstruction as Cervical stenosis
* leiomyomas, endometrial polyps, IUCD.

For this reason, secondary dysmenorrhea may be associated with other gynecologic symptoms, such as dyspareunia, dysuria, abnormal bleeding, or infertility.

Clinical features:

Dysmenorrhoea appears 6-12 months after menarche when ovulatory cycles begin to become established (anovular cycles are usually painless), it typically consists of crampy suprapubic pain which starts at the onset of menstrual flow and lasts 8-72 hours. There may be backache and gastrointestinal disturbances such as diarrhea and vomiting.

Diagnosis: dysmenorrhea is diagnosed from the history of painful menstruation. The diagnosis of primary dysmenorrhoea is one of exclusion, so proper history and examination to exclude other pathologies. ***Investigations*** are:

- Endocervical swab for Chlamydia trachomatis and neisseria gonorrhoea, pap smear
- High vaginal swab for other pathogens
- TVS for structural abnormalities
- Laparoscopy to visualize pelvic organs
- Hysteroscopy if asherman's syndrome or cervical stenosis is suspected
- Magnetic resonance imaging (MRI)

Treatment:

Medical treatment

The mainstays of treatment are Non-Steroidal Anti-Inflammatory Drugs and the combined oral contraceptive pills when fertility control is required.

1. **NSAIDs** such as naproxen, ibuprofen and mefenamic acid. Aspirin is less effective. NSAIDs inhibit cyclo-oxygenase enzyme so reduce the prostaglandin production. They can have side effects of nausea, dyspepsia, peptic ulcer, and diarrhea. People who are unable to take the more common NSAIDs, may be prescribed a COX-2 inhibitor

2. **The combined oral contraceptive pills**: they act by inhibiting ovulation and decrease endometrial production of prostaglandins and leukotrienes.

3. Other hormonal methods like **depot progestogens** that render most women amenorrhoeic, **levonorgestel releasing intrauterine devise (LNG-IUS)** also causes amenorrhoea, **danazol** (which is androgenic steroid) mainly inhibits ovulation, **GnRH analogues** when given in continuous manner suppress the pituitary gland.

4. Other methods: **calcium channel blockers** as nifedipine **and beta-adrenergic agonists** as salbutamol can reduce uterine contractility. **Vasopressin receptor antagonist** has been shown to be effective

5. Non medical:The effectiveness of behavioral interventions, thiamine, vitamin E, topical heat, and transcutaneous electrical nerve stimulation is likely

Surgical treatment

Surgical treatment aimed at interrupting the nerve pathways from the uterus as presacral neurectomy for women whose condition is unresponsive to other therapies.

Rarely in severe cases hysterectomy may be a choice .

Premenstrual syndrome

Definition:

Premenstrual syndrome is the occurrence of cyclical somatic, psychological and emotional symptoms that occur in the luteal (premenstrual) phase of the menstrual cycle and resolve by the time menstruation ceases.

Prevalence:

Premenstrual symptoms occur in almost all women of reproductive age, but in only about 5% are they sufficiently severe to cause significant problems.

Aetiology:

The aetiology of PMS is unknown, genetic, environmental, and psychological are important factors in mood disorders as well as variation in sex steroid levels, and low serotonin level may play a role.

It is strongly considered that the cyclical endogenous progesterone produced in the luteal phase of the cycle is responsible for symptoms in women who are unusually sensitive to normal progesterone level, and it has been hypothesized that the mechanism of this increased sensitivity is related to an abnormal neuroendocrine factor and most evidence points to a dysregulation of serotonin metabolism.

Women have no PMS before puberty, during pregnancy or after the menopause, and suppression of the ovarian endocrine cycle results in suppression of PMS symptoms.

Clinical features:

The symptoms of PMS may include any of the following:

1. Physical symptoms as bloating, cyclical weight gain, mastalgia, abdominal cramps, fatigue, headache.

2.Psychological symptoms as depression, irritability, anxiety, aggression, inability to cope, and feeling out of control.

Diagnosis:

The cyclical nature of PMS is the cornerstone of the diagnosis.

- A symptom chart, to be filled in by the patient prospectively, may help in the diagnosis.

- GnRH analogue test for the purpose of removing the ovarian cycle to determine which of a patient' symptoms are clearly related to the endocrine cycle and which are not.

Calendar of premenstrual experiences (COPE)

Day of cycle	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
Day of month																																		
Irritability	3	3	3	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	3	3	3	2	3	3	2	3	2	3	2	1	1	1
Mood swings	3	3	3	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	3	3	2	3	3	2	3	2	3	2	1	1	1
Depression	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hostility	3	3	3	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	3	3	2	3	3	2	3	2	3	2	1	1	1
Sadness	3	3	3	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	3	3	3	2	3	3	2	3	2	3	2	1	1	1
Negative thoughts	3	3	3	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	3	3	2	3	3	2	3	2	3	2	1	1	1
Bloating	3	3	3	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	3	3	2	3	3	2	3	2	3	2	1	1	1
Breast pain	3	3	3	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	3	3	2	3	3	2	3	2	3	2	1	1	1
Appetite changes	3	3	3	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	3	3	2	3	3	2	3	2	3	2	1	1	1
Carbohydrate cravings	3	3	3	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	3	3	2	3	3	2	3	2	3	2	1	1	1
Hot flashes	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	1
Insomnia	3	3	3	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	3	3	2	3	3	2	3	2	3	2	1	1	1
Headache	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fatigue	3	3	3	1	1	1	0	0	0	0	0	0	0	1	1	1	1	1	1	1	3	3	3	2	3	3	2	3	2	3	2	1	1	1
Confusion	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Poor concentration	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	3	0	0	0	0	2	1	1	1
Social withdrawal	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hyperphagia	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Arguing	3	3	3	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	3	3	2	3	3	2	3	2	3	2	1	1	1
Decreased interest	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Day 1 is the first day of cycle. (i.e. first day of menses)
Use one chart for each menstrual cycle
Luteal phase and thus, ovulation occurs 14 days before menses

Severity code: 0 = none
1 = mild
2 = moderate
3 = severe

Fig. 41.1 A chart prospectively completed by a patient suffering with PMS. Note the cyclicity of symptoms, occurring mainly premenstrually and the absence of symptoms in the follicular phase.

Treatment:

Non-medical therapies:

Exercise, cognitive behavioural therapy, calcium, vitamin E and B6 supplementation may be of benefit.

Medical therapies:

Treatment should be achievable either by suppressing ovulation and the endocrine cycle or by elevating serotonin levels.

1. Selective serotonin reuptake inhibitors (SSRIs) such as fluoxetine significantly improve PMS.
2. Diuretics are helpful for the treatment of bloating and breast tenderness.
3. NSAIDs may be effective in the treatment of physical symptoms.
4. Cycle suppression with oestrogen, danazol (which is androgenic steroid), GnRH agonist analogues, or bilateral oophorectomy.


THANK
YOU