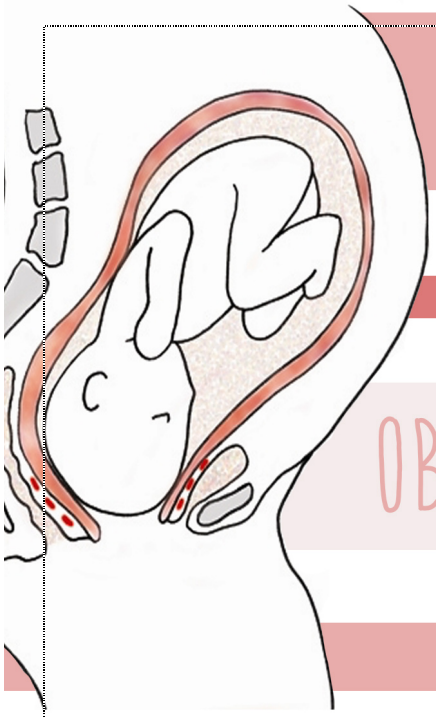

OBSTETRICS AND GYNECOLOGY

(#8) DYSMENORRHEA, PMS & ENDOMETRIOSIS

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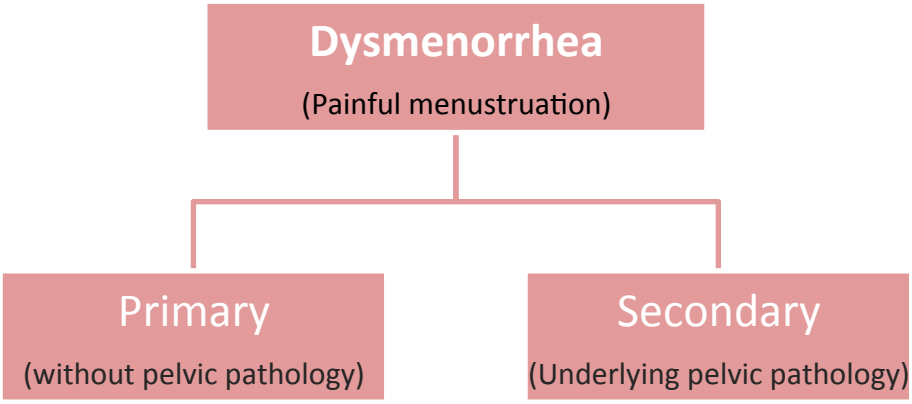
Doctor's note **Team's note** Not important **Important**

Objectives:

Not Given.



PREMENSTRUAL SYNDROME

(group of physical, emotional & behavioral symptoms that occur in the 2nd half (luteal phase) of the menstrual cycle.)

ENDOMETRIOSIS

(Ectopic Endometrial Tissue)

Dysmenorrhea

- Painful menstrual period, characterized by cramping lower abdominal pain radiating to the back and legs, often accompanied by GI & neurological symptoms as well as general malaise.
- Affects approximately 50% of menstruating women, but about 5-10% have severe dysmenorrhea affecting daily activities.

Kaplan:

Primary dysmenorrhea is the most common gyne complaint among adolescent females. While secondary is more common among women in fourth and fifth decades of

CLASSIFICATIONS:

I. Primary or idiopathic → without pelvic pathology, usually in young age.

II. Secondary → underlying pelvic pathology. Usually around fourth or fifth decade.

PRIMARY DYSMENORRHEA

- Usually appear within 1-2 yrs of menarche, when ovulatory cycles are established.
- Main physiological basis is increased endometrial prostaglandin productions.
- PGF2 alpha & PGE2 in high concentrations sp. in secretory endometrium because of decline of progesterone levels in late luteal phase.
- Increased uterine tone with high amplitude contractions→ reduced blood flow→ ischemic pain.

CLINICAL FEATURES OF PRIMARY DYSMENORRHEA:

- Pain usually begins a few hours prior to or just after the onset of period & may last as long as 48-72 hrs.
- Labor-like pains with suprapubic cramping, lumbosacral backache radiating down the anterior thigh.
- Colicky pain improved with massage, counter pressure or movement.
- Nausea, vomiting, diarrhea with rarely syncope episodes.
- Normal findings except some tenderness.

DIAGNOSIS:

- Necessary to rule out underlying pelvic pathology.
- Confirm the cyclic nature of the pain.
- Consider differential diagnosis:
    1. Fibroid uterus
    2. Endometriosis
    3. Pregnancy complications like abortions & ectopic
    4. PID
    5. UTI
    6. Other causes of acute abdomen.
    7. It could be psychological

TREATMENT:

- Reassurance.

- Prostaglandin synthetase inhibitors are effective in approximately 80% of cases. Also improve menorrhagia if associated.

- NSAIDs-Mefenamic acid, Ibuprofen, Diclofenac etc may be taken with/ without antispasmodics. (First line treatment and it's usually effective).

    - Drugs should be taken just prior to or at the onset of pain and continuously every 6-8 hrs to prevent reformation of PG by-products, and for the first few days of period for 3-6 cycles.

- Combined oral contraceptive pills is the drug of choice in patients who fail to improve with NSAID, or when NSAID contraindicated, or pt who desire contraception or associated with menorrhagia.

    - OCP- suppress endometrial proliferation, inhibits ovulation → no corpus luteum→ decrease prostaglandin synthesis.

    - Should be taken from day 5→ day 21 for 3-6 cycles.

- In non-responders- codeine may be added.

- Usually relieved spontaneously after delivery. (sympathetic nerves at isthmus & cervix destroyed).

- Invasive procedures like D & C not desirable in nulliparous / unmarried.

- Transcutaneous electrical nerve stimulation, paracervical block etc. may be useful.

- Laparoscopic uterine nerve ablation or pre-sacral neurectomy –used rarely in severe & non-responding cases.

SECONDARY DYSMENORRHEA.

- Usually occurs many years after the onset of menarche.

- Pain often begins 3-5 days prior to period & relieved with onset of period, but sometimes may persist continuously up to a few days after the cessation of bleeding.

UNDERLYING PATHOLOGY IN SECONDARY DYSMENORRHEA.

1. Endometriosis / Adenomyosis. (The most common cause)
2. Fibroid uterus
3. Congenital uterine anomalies- bicornuate, septate etc.
4. Cervical stenosis.
5. Endometrial polyps.
6. Pelvic inflammatory disease.
7. IUCD

DIAGNOSIS

- Abdominal & vaginal examination may reveal the underlying lesion.
- May need investigations like:
    1. US (Very IMP for gyne, Could show endometriosis if it presents like endometrioma, endometrial polyps, IUCD if it's in the right position or not, or if there's anatomical abnormality)
    2. Laparoscopy,
    3. Hysteroscopy,
    4. Hysterosalpingogram etc.

TREATMENT

- ✖ Analgesics.
- ✖ Treatment of underlying cause accordingly.

PREMENSTRUAL SYNDROME (PMS): (Premenstrual Tension Syndrome)

- Is a group of physical, emotional & behavioral symptoms that occur in the 2nd half (luteal phase) of the menstrual cycle.
- Often interfere with work & personal relationships followed by a period entirely free of symptoms starting with menstruation.

INCIDENCE

- ✖ 40% ⇨ Significantly affected at one time or another.
- ✖ 2-3% ⇨ Severe symptoms with impact on their work & lifestyle
- ✖ 5% by the American psychiatric association definition

SYMPTOMS

PHYSICAL	EMOTIONAL / PSYCHOLOGICAL
✓ Bloating ✓ Weight gain ✓ Breast pain & tenderness ✓ Skin disorders "acne" ✓ Hot flushes ✓ Headache ✓ Pelvic pain ✓ Changes in bowel habits ✓ Joint or muscle pain ✓ Edema	✓ Irritability ✓ Aggression ✓ Tension ✓ Anxiety ✓ Depression / ↓ interest in the usual activities ✓ Lethargy ✓ Sleep disturbances ✓ Change in appetite ⇨ overeating or food craving ✓ Crying ✓ Change in libido ✓ Thirst

	✓ Loss of concentration ✓ Poor coordination, Clumsiness, accidents

ETIOLOGY

- Unknown cause.
- Many theories have been postulated, most of them have to-do with various hormonal alterations.
- Vitamin B6 deficiency.
- Multi-factorial psycho-endocrine disorder
- Ovulation / progesterone production are important in this syndrome ⇨ Drugs that inhibit ovulation ⇨ relief of PMS symptoms

EVALUATION

- Pt should keep a diary of her symptoms throughout 2-3 menstrual cycles.
- Complete History & physical examination to R/O any medical problem.

DIAGNOSIS:

The Diagnostic Statistical Manual for Mental Disorders requires 5 of the following:

1. Depressed mode
2. Anxiety
3. Emotional Liability
4. Irritability
5. Change in appetite
6. Lethargy

7. Sleep disturbance
8. Out of control
9. Lack of interest
10. Physical symptoms
11. Occur in the week before menses in most menstrual cycles
12. Disappear few days after the onset of menses
13. Impair social, occupational function or the ability to interact with others.

TREATMENT

1- SUPPORTIVE

2-MEDICATIONS:

The selection of medications should be tailored to the patient's main symptoms.

- LIFE STYLE CHANGES

✖ **Adequate rest & sleep**

✖ **Aerobic exercise ⇨ 20-30 min 3-7 times/wk ⇨**

-↑ β-endorphins in the brain

-Distract the women from her emotional feelings

✖ **Healthy diet ⇨ Avoid fasting**

Frequent small meals, ↑ Complex carbohydrates, ↓ Simple sugars, Salt & Caffeine, Avoid fat free diet, High protein diet

- MEDICAL THERAPY

SYMPTOMATIC Rx

1- Bloating & feeling of fluid retention ⇨ Diuretics (spironolactone)
2-Cramping, back pain, heat intolerance ⇨ Antiprostaglandines
3-Breast tenderness ⇨ Bromocriptine
4-Depression, anxiety, irritability ⇨ Alprazolam 0.25 mg bd
SSRI ⇨Fluoxetine (Prozac) 5-20 mg/D (D20-28)

SUPPRESSION OF OVULATION

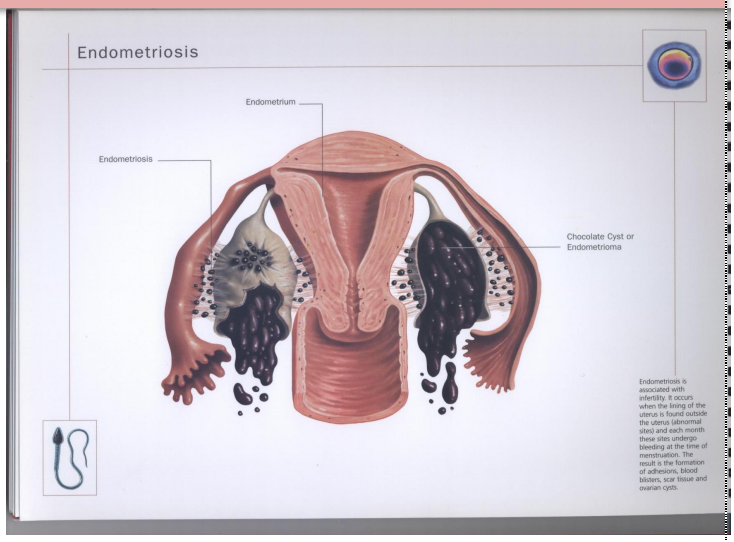
1-Danazol 200 mg QID D 20-28

2-Oral Contraceptives
3-Medroxyprogestrone acetate 10 mg BID/TID continuously.

MISCILANEOUS Rx

1-Micronized progestrone
2-Multiple Vitamines
3-Pyridoxine B6 ⇨ 50 mg/ day or B-complex
4-Ca Carbonate
5-Prime rose oil ⇨γ linolenic acid

ENDOMETRIOSIS



Definition: Ectopic Endometrial Tissue

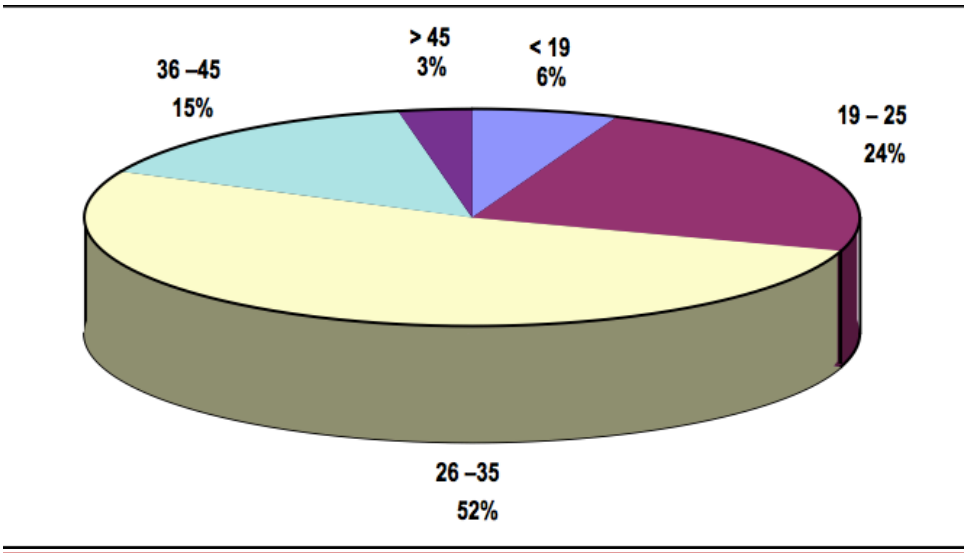
(The most common site is the ovary, 75% of cases, and the next common site is the peritoneum of Douglas pouch)

- ✖ True Incidence Unknown: ? 1-5%
- ✖ 30 -40 % Infertility patients
- ✖ Does NOT Discriminate by Race
- ✖ Histology: Endometrial Glands with Stroma +/- Inflammatory Reaction

SIGNS AND SYMPTOMS

1. Chronic Pelvic Pain, Dysmenorrhea
2. Infertility
3. Deep Dyspareunia
4. Pelvic Mass (Endometrioma)
5. Misc: Tenesmus, Hematuria(if it's in the urinary bladder), Hemoptysis (if in the lungs).

AGE AT DIAGNOSIS:



Most of the patients diagnosed above the age of 26.

ETIOLOGY: THEORIES

Sampson: "Retrograde Menstruation", Hematologic Spread, Lymphatic Spread, Coelomic Metaplasia, Genetic Factors, Immune Factors, Combination of the Above

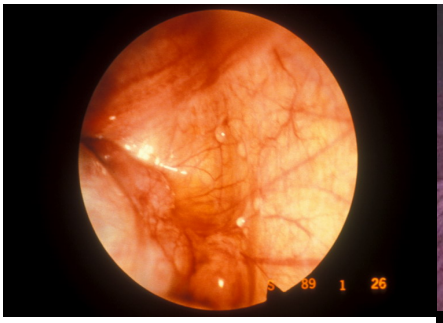
No Single Theory Explains All Cases of Endometriosis

DIAGNOSIS:

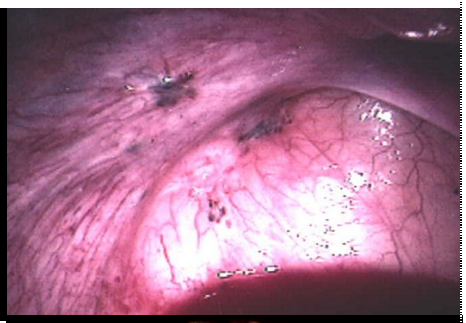
- Laparoscopy (Gold Standard)
- Laparotomy (Not done to diagnose endometriosis but if the patient is going to do laparotomy for other reason they might find an endometriosis)
- Inconclusive: CA-125, Pelvic Exam, History, Imaging Studies
- Biopsy Preferable Over Visual Inspection

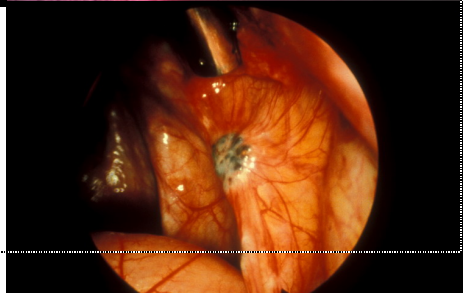
APPEARANCE

- ✖ Brown
- ✖ Black ("Powder burn")
- ✖ Clear ("Atypical")



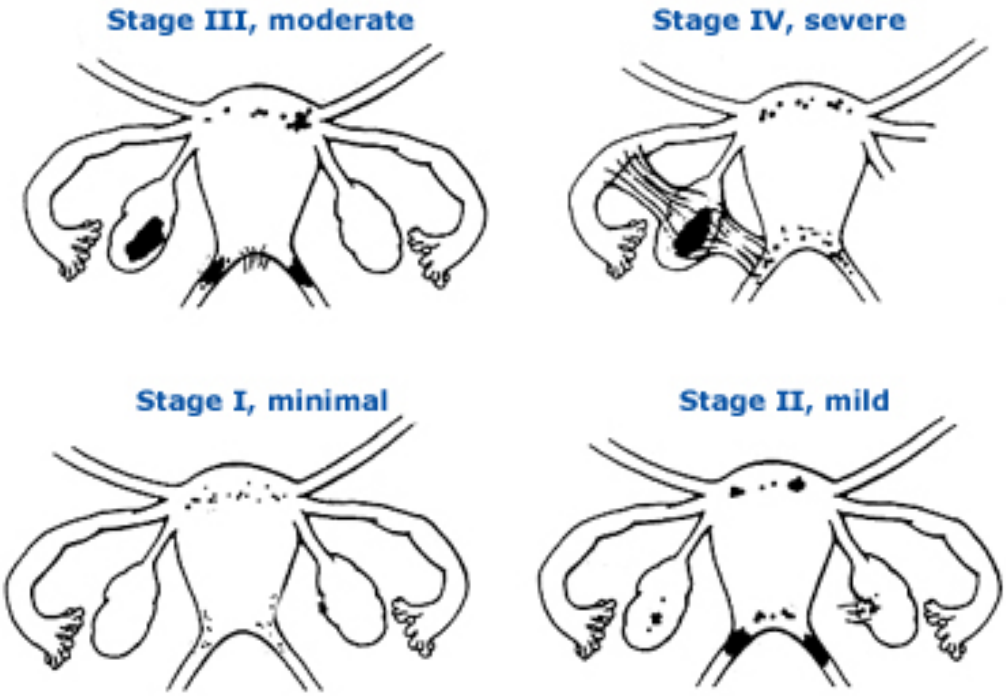
Clear (Atypical)





CLASSIFICATION / STAGING:

- ✖ Several Proposed Schemes
- ✖ Revised AFS System: Most Often Used
- ✖ Ranges from Stage I (Minimal) to Stage IV (Severe)
- ✖ Staging Involves Location and Depth of Disease, Extent of Adhesions



TREATMENT: OVERALL APPROACH

- ✖ Recognize Goals:
  - Pain Management
  - Preservation / Restoration of Fertility
- ✖ Discuss with Patient:
  - Disease may be Chronic and Not Curable
  - Optimal Treatment Unproven or Nonexistent

* PAIN MANAGEMENT: MEDICAL THERAPY

- Nonhormonal Treatment:

- Indicated for small lesions with mild symptoms.
- Analgesics are given, for pain.
- Prostaglandin inhibitors are given for pain and menorrhagia. Because the condition improves as a result of pregnancy, young women are encouraged to conceive. During pregnancy the ectopic endometrium is changed into decidua followed by atrophy of the glands.

- Hormonal Treatment:

Indications: (in non surgical cases, but conditions like chocolate cyst managed by surgery)

- Severe symptoms with small pelvic lesions, lesions more than 2 cm in diameter respond poorly to hormone therapy. (for smalls lesions)
- Recurrence of symptoms after conservative surgery.
- May be given for a short time (6-12 weeks) before surgery to make dissection easier. (Like what we do with neoadjuvant chemotherapy)
- After conservative surgery to allow any residual lesion to regress.
- When operation is contraindicated or refused by the patient.

1.Pseudopregnancy: (Is one of the best to do)

Aim of treatment: Ovulation and menstruation are inhibited for 9 months (6-18 months) using a combined oral contraceptive or a progestogen alone to avoid the oestrogenic side effects. The endometrium will undergo atrophy during the pseudopregnancy state.

2. Pseudomenopause:

Aim of treatment: The hormone cause amenorrhoea and endometrial atrophy. It included:

A-Danazol
B-Gestrinone
C- A gonadotrophin releasing hormone analogue.

* SURGICAL TREATMENT (LAPAROSCOPY / LAPAROTOMY)

- Excision / Fulguration
- Resection of Endometrioma
- Lysis of Adhesions, Cul-de-sac Reconstruction
- Uterosacral Nerve Ablation
- Presacral Neurectomy
- Appendectomy
- Hysterectomy +/- BSO

431 team

Adenomyosis

It is uterine endometriosis in which endometrial glands and stroma are found within the myometrium (the diagnosis is hard, the uterus is just enlarge, no typical presentation. The defined diagnosis is by histopathology).

*most cases are found in women in their 40s and 50s "perimenopause"

INVESTIGATIONS:

- Ultrasonography.
- Magnetic resonance imaging. It can give accurate diagnosis.
- Histological examination of the uterus after hysterectomy is the only sure diagnostic method.

TREATMENT:

- Medical treatment: Analgesics for dysmenorrhoea.
  Antiprostaglandins improve both dysmenorrhoeaand menorrhagia .
- Severe menorrhagia is treated by dilatation and curettage.
- Gonadotrophin releasing hormone analogues lead to amenorrhoea and decrease in uterine size. However, the effect is temporary and the uterus returns to its original size with the same symptoms after cessation of therapy.
- **Hysterectomy is the definite treatment.**

Kaplan:

The most common presentation is diffuse involvement of the myometrium.

In most cases, the diagnosis is made clinically by identifying an enlarged, symmetric, tender uterus in the absence of pregnancy.

Summery:

. Dysmenorrhea is two types, primary and secondary. **Primary** does not have pelvic pathology while **secondary** is secondary to pelvic pathology as endometriosis, chronic pelvic infection or endometrial polyps.

. Secondary dysmenorrhea most common causes are ensometriosis and adenomyosis.

. Premenstrual tension syndrome symptoms are temporarily related to menstruations.

. Endometriosis means the presence of endometrial tissue (glands and stroma) in abnormal sites, that is outside the normal uterine cavity. This ectopic endometrium responds to the ovarian hormones as the normal endometrium.

. Endometriosis is two types, internal endometriosis which is known as adenomyosis, and external endometriosis.

. In endometriosis, patient could present with dysmenorrhoea (2ry): progressive (crescendo dysmenorrhoea).

. The gold standard for diagnosis of pelvic endometriosis is laparoscopy.

. Adenomyyosis is uterine endometriosis in which endometrial glands and stroma are found within the myometrium.

. Magnetic resonance imaging can give accurate diagnosis of adenomyyosis.

. Hysterectomy is the definite treatment of adenomyyosis.

MCQ's : Questions from First Aid for OBGYN

26-year-old woman complains of feeling sad and confused before her menses. She reports having headaches and breast pain. She feels better when she is alone, but she is able to work and take care of her 2 children. Once she begins menses, she no longer has these symptoms. What is the most likely diagnosis. What is the best way to make the diagnosis?

Answer: PMS. This patient has affective and somatic complaints that resolve with menses. She is able to continue her daily activities despite the symptoms. Best diagnostic method is keeping a prospective symptom diary for 2 months.

A 32-year-old G0P0 presents to the infertility clinic with a 3-yr history of infertility. She states that her menses began at age 13 and occurs on regu- lar 28-day intervals. She complains of severe monthly pain 1 week before each menses and pain with intercourse. She denies a history of sexually transmit- ted diseases. Her husband has a child from a previous marriage. On rectovaginal exam, she has uterosacral nodularity and a fixed, retroflexed uterus. What diag- nostic test would be the most appropriate at this point to make the diagnosis? What findings would you see on a tissue biopsy?

Answer: The patient has classical symptoms of endometriosis, especially dysmenorrhea and dyspareunia. Endometriosis is a common condition associated with infertility. Laparoscopy is the diagnostic test of choice. The tissue biopsy would show endometrial glands, stroma, and hemosiderin-laden macrophages. Most common site: ovary and pouch of Douglas.

A 39-year-old G4P4 comes to the clinic complaining of increasing menor- rhagia, dysmenorrhea, and an enlarging uterus. On physical exam, the uterus is 14 weeks in size, boggy, slightly tender, and mobile. What would be the next best step in management?

Answer: Unfortunately there is no proven medical therapy for adenomyosis.GnRH agonists can be used to cause a menopause-like state with complete ces- sation of ovarian function and menses, causing the abnormal tissue to shrink. NSAIDs and OCPs improve dysmenorrhea and regulate the heavy menses.

For mistakes or feedback

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