Obstetrics & Gynecology
TEAM

Dysmenorrhoea, premenstrual syndrome & endometriosis

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◆very important ◆mentioned by doctor ◆team notes ◆not important

Dysmenorrhea

(Painful menstruation)

Primary dysmenorrhoea:

- No pelvic pathology.
- The pain is associated with bleeding in the first and second day.

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 life.

Secondary dysmenorrhoea:

- Secondary to pelvic pathology as endometriosis, chronic pelvic infection or endometrial polyps
- The pain starts few days before menstruation, continues for the duration of menses and may persist for days after.

Incidence:

80% of patients attend family planning clinic have dysmenorrhoea and was severe in 18% of them (Robinson et al., 1992)

Epidemiology:

- Long time smoker six time more than non-smokers
- Age is inversely associated with dysmenorrhoea
- Less common in parous women.

Pirimary Dysmenorrhea

Aetiology:

- Uterine hyperactivity: abnormal (increased) uterine hyperactivity leading to uterine eschemia. (and ischemia cause pain)
- Hyperalgesic substances e.g. prostaglandin E.

Causes:

- Increased uterotonic prostaglandins PGF_2a (found to be high in patient with dysmenorrhoea cause increase in contraction> ischemia> pain)
- Leucotrines produced by endometrium stimulates myometrial activity
- Vasopressin is a vasoconstrictor substance which stimulates uterine contraction. Circulating vasopressin levels was found to be higher on the first day of menstruation in women with dysmenorrhoea. (the same, cause increase in contraction> ischemia> pain)

Treatment of primary dysmenorrhoea

Medical treatment

- Reassurance and simple analgesic (sometime is enough specially for primary)
- NSAIDs are useful first line treatment with 80-90% improvement, particularly the mefenamic acid derivatives.
- If contraception is also required OCCP is appropriate.
- Oxytocin antagonist for future. (nothing currently)

Surgical treatment (rarely as a last choice)

- Used as last resort
- Laparoscopic uterosacral nerve ablation LUNA
- Hysterectomy (with bilateral ovarian oophorectomy)
- Cervical dilatation has no beneficial effect

Secondary Dysmenorrhea

Aetiology

- Endometriosis and adenomyosis (The commonest cause)
- Chronic PID
- Congenital or acquired uterine abnormalities

Investigations:

- USS (Very IMP for gyne, if she have endometriosis, endometrial polyps, all appear in US)
- HSG (Radiological modality, injecting contrast to view)
- Hysteroscopy
- laparoscopy

Treatment of secondary dysmenorrhea: (that of the cause), e.g.

- Endometriosis
- Adenomyosis
- Uterine abnormalities

Premenstrual Tension Syndrome

Recurring cyclical disorder in the luteal phase of the menstrual cycle, involving behavioral, psychological and physical changes resulting in loss of work or social impairment (Ried and Yen 1981). PMT may occur after hysterectomy with conservation of functioning ovaries

Diagnosis: (Should be severe enough to effect work or social life)

The American psychiatric association (APA) criteria for diagnosis are:

A. Symptoms are temporarily related to menstruation

B. The diagnosis requires at least 5 of the following symptoms, and one of the symptoms must be one of the first 4:

1. Affective labiality sudden onset of being sad, tearful, irritable or angry
2. Anxiety or tension
3. Depressed mode, feeling of hopelessness
4. Decreased interest in usual activities
5. Easy fatigability or marked lack of energy
6. Difficulty in concentration
7. Changes in appetite (food craving or over eating)
8. Insomnia
9. Feeling of being overwhelmed or out of control
10. Physical symptoms (bloating, breast tenderness, headache, edema, joint or muscular pain and weight gain.

A. The symptom interfere with work, usual activities or relationship

B. The symptoms are not an exacerbation of another psychiatric disorder

Prevalence:

Difficult to ascertain; 40% reported mild symptoms, of them 2-10% the symptoms interfere with their work or life style.

Etiology list of biological theories:

- Estrogen excess
- Progesterone deficiency
- Hyperprolactinemia
- Hypoglycemia
- Vit. B deficiency
- Increased aldosteron activity

Treatment of PMS

A. Non pharmacological treatment:

- Reassurance and support
- Relaxation and stress management
- Reflexology therapy that reduce somatic and psychological PMS symptoms
- Increase aerobic exercise ? By altering endorphins
- Well balanced diet with low sodium and fat contents
- Restriction of alcohol, chocolate, caffeine and dairy products
- Supplementation with vitamin B_6, E, magnesium and calcium
- Evening primrose oil
- Women on estrogen replacement therapy does not develop symptoms of PMS unless progesterone is added

B. Medical treatment:

- Pharmacological suppression of the hypothalamopituitary ovarian axis should offer a logical approach to therapy (to stop cyclical ovarian activity)
- Ovarian suppression using OCCP is beneficial in some patients but cause exacerbation of symptoms in others
- Danazol for breast symptoms
- GnRH agonist: it improve symptoms in some women & can be used as a treatment
- Diuretics in patients complaining of bloating, edema and weight gain
- NSAIDs: reduce many of the somatic symptoms as dysmenorrhoea
- For emotional and psychological manifestations serotoninergic antidepressent offer good first line approach. Fluoxetine (Prozac)
- Anoxiolytic as alprazola (Xanox) also offer some help.

C. Surgical treatment: (For really severe cases)

- Reserved only to patients with severe symptoms not responding to medical treatment
- Hysterectomy
- Bilateral oophorectomy (balance between symptoms relief and hypoestrogenic state and complications and the coast of HRT.

Endometriosis

- 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.

PREVALENCEL:

- The prevalence is about 5-10% in adult women and 20-40% in the infertile women.

THEORIES OF AETIOLOGY: Disease of theories!

- Endometriosis is explained by more than one theory because not all cases arise in same way. However, the true cause is unknown. (one theory is retrograde menstruation, few spots, some blood does not go out through the cervix and vagina out, it goes up to the tubes due to construction or whatever, that is why the ovaries are the most common site for ectopic endometriosis, or it goes to Pouch of Douglas which another common site. This is the closest theory)

CLASSIFICATION:

1-internal endometriosis:

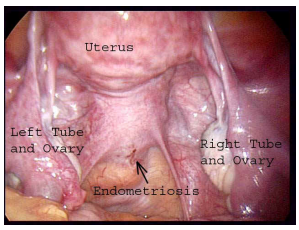
known as adenomyosis, which is endometriosis of the myometrium.

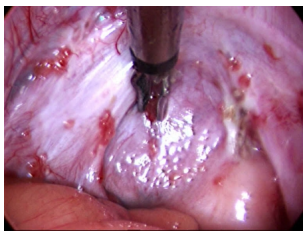
2- external endometriosis:

The commonest site of extrauterine-endometriosis is the ovary (75% of cases) and the next common site is the peritoneum of Douglas pouch.

SITES:

A. Pelvic Endometriosis:





- Uterine body, in the myometrium or perimetrium
- cervix
- tubes
- ovaries
- pelvic peritoneum
- the uterosacral and round ligaments
- rectovaginal septum
- urinary bladder and ureters
- rectum and sigmoid colon
- vagina
- vulva.
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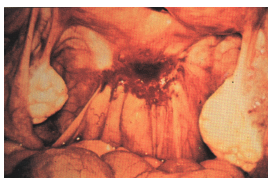
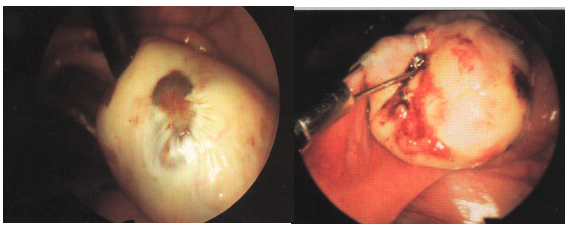


- Adhesions may obliterate the rectovaginal pouch fixing the uterus in retroversion, or there may be adhesion of the pelvic colon to the posterior surface of the uterus and the Pouch of Douglas Adhesions causing problems to the pt like infertility.

Ovarian Endometriosis:

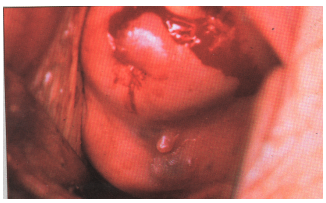
The ovary is a common site for endometriosis and may present either with superficial lesions or the more classic endometrioma or endometriotic cyst (chocolate cyst) Looks like chocolate because it's collection of blood, and the color change to look like chocolate because it's not a fresh blood.



B.Extrapelvic Endometriosis:

- Umbilicus
- abdominal scar as after caesarean section
- abdominal visceraas gallbladder or appendix.
- Actually endometriosis can occur anywhere in the bodyeven in the limbs. Like in eyes and the pt tear blood, or lung and the pt cough blood, limb or scar.

Extrapelvic Endometriosis: Endometrium has been identified in almost every organ in the body
- The picture is for Endometriosis involving the posterior fornix Dr. Meshaal had many pt having endometriosis in the P fornix.



Posterior fornix

Risk factors:

- Hyperoestrinism.
- Delayed marriage and infertility. sometime we advise the pt to get pregnant so the tissue get atrophied, and to prevent recurrence, this is why delayed marriage & infertility could be a risk factor.
- Cervical obstruction
- Hysterosalpingography and curettage. That is why it's done for the pt 2-3 days after menstrual cycle.

Presentaation:

- Dysmenorrhoea (2ry): progressive (crescendo dysmenorrhoea).
- Chronic pelvic pain and backache
- Dyspareunia
- Infertility.
- acute abdominal pain.
- Dysuria (on the bladder), dyschezia (on the rectum), cyclic haematuria and rectalbleeding during menstruation.

GYN Train: (Kaplan)
Endometriosis
- Chronic pelvic pain
- Painful intercourse
- Painful bowel

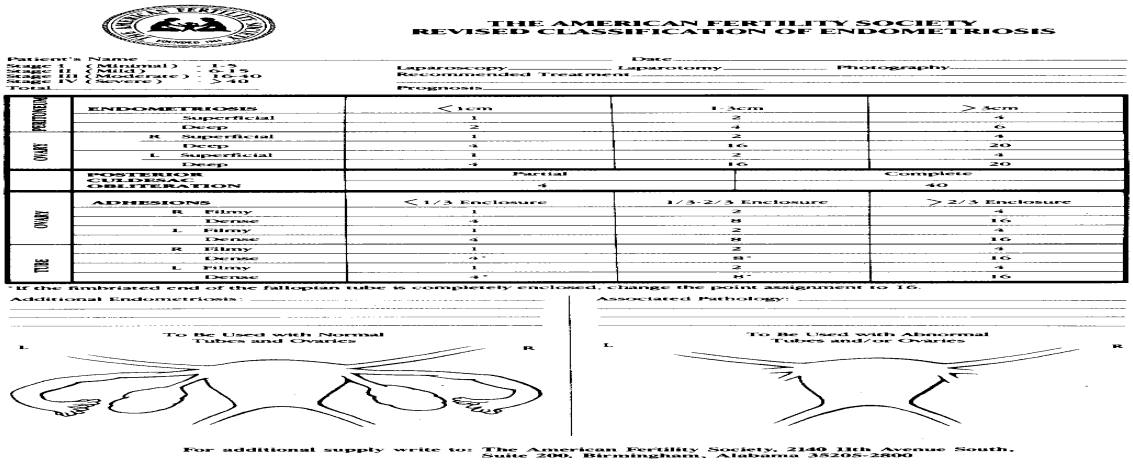
INVESTIGATIONS: (remember US always but it not definitive, like you can see hemorrhage on US and it looks like chocolate cysts)

The gold standard for diagnosis of pelvic endometriosis is ***laparoscopy***. Visual inspection by laparoscopy has increased the awareness of the multiple, subtle and typical appearances of peritoneal endometriosis

* (you don't have to know the staging neither the staging. It's important for doctors to know the response to treatment) the schedule is not being done by the general OB/GYNs, maybe it specialize clinics.

The laparoscope is used to classify the disease into 4 stages - Stage I (minimal); stage II (mild); stage III (moderate); and stage IV (severe). This is the classification of the American Fertility Society and is done before starting therapy and to follow the response to treatment.

The American Fertility Society Revised Classification Of Endometriosis:



THE AMERICAN FERTILITY SOCIETY
REVISED CLASSIFICATION OF ENDOMETRIOSIS

Patient's Name _____ Date _____
Stage I (Minimal) : 1-5
Stage II (Mild) : 6-15
Stage III (Moderate) : 16-40
Stage IV (Severe) : >40
Total _____
Laparoscopy _____ Laparotomy _____ Photography _____
Recommended Treatment _____
Prognosis _____

	ENDOMETRIOSIS	< 1cm	1-3cm	> 3cm
PERITONEUM	Superficial	1	2	4
	Deep	2	4	6
OVARY	R. Superficial	1	2	4
	Deep	4	10	20
	L. Superficial	1	2	4
	Deep	4	10	20
	POSTERIOR CULDESAC OBLITERATION	Partial 4		Complete 40

	ADHESIONS	< 1/3 Enclosure	1/3-2/3 Enclosure	> 2/3 Enclosure
OVARY	R. Filmy	1	2	4
	Dense	4	8	16
	L. Filmy	1	2	4
	Dense	4	8	16
TUBE	R. Filmy	1	2	4
	Dense	4*	8*	16
	L. Filmy	1	2	4
	Dense	4*	8*	16

*If the fimbriated end of the fallopian tube is completely enclosed, change the point assignment to 16.

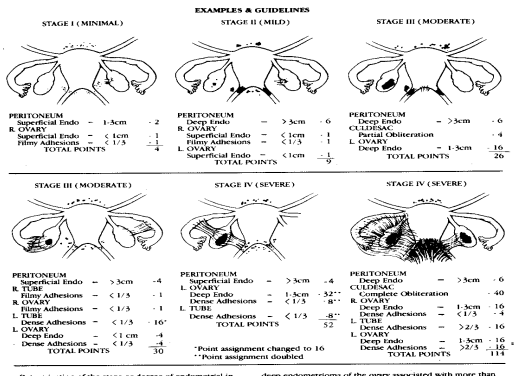
Additional Endometriosis: _____
Associated Pathology: _____

To Be Used with Normal Tubes and Ovaries — To Be Used With Abnormal Tubes and/or Ovaries

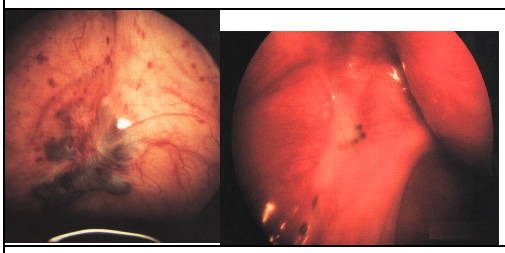
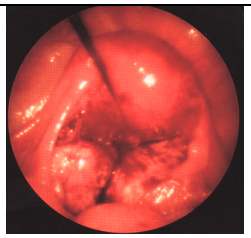
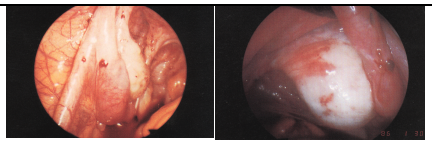
For additional supply write to: The American Fertility Society, 2140 11th Avenue South, Suite 200, Birmingham, Alabama 35205-2800

American Fertility Society Classification (1979):

- Stage I (Mild) 1-5.
- Stage II (Moderate) 6-15.
- Stage III (Severe) 16-30.
- Stage IV (Extensive) 31-54



Stages of endometriosis

Classical Lesions		
		
Classical lesions:"Powder-burn", puckered black. Some pt have frozen pelvic, when you open the pt up, everything is adhisions to each other, you can't see anything neither operate.	Bilateral ovarian endometriosis, adherent to each other and posterior uterine wall "kissing ovaries"	Tubal endometriosis

Subtle lesions: (pictures in the slides)

- Vesicular
- Sacular
- Haemorrhagic
- Papular.
- Nodular.
- Discolored: Yellow, brown, White and Blue.
- Peritoneal defects
- Cribriform peritoneum.
- Subovarian adhesions.

Other investigations:

- Ultrasonography
- Serum CA-125 (not very specific to endometriosis, could be high my menstrual cycle or cancers, but you may use it for treatment follow up)
- Cystoscopy, proctoscopy or sigmoidoscopy may be needed to diagnose endometriosis of the bladder or bowel.
- Magnetic resonance imaging. (for extra-pelvic)

Management:

1. No Treatment:

Small symptomless lesions require no treatment, but the patient is kept under observation and examined every 6 months. Sometimes, the lesions become inactive after a time.

II. 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.

III. 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

D- Gossypole

IV. Surgical Treatment:

It is indicated for large lesion when hormonal therapy fails.

Surgery is conservativ or radical

1. Conservative Surgery:

In young patients below 40 years the aim of operation is to remove all areas of endometriosis leaving behind healthy ovarian tissue

2. *Radical Surgery:*

When the patient is above 40 years the treatment is total abdominal hysterectomyand bilateral salpingo-oophorectomy.

V. Radiological Treatment:

- Induction of artificial menopause by external pelvic radiation cures the conditionby causing atrophy of endometrial tissue.
- It is applied only in patients above 40 in whom operation cannot be done as in case of wide spread pelvic endometriosis (frozen excise surgically. or endometriosis of the rectovaginal septum which is difficult to excise surgically.)

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)

PATHOLOGY:

- Adenomyosis may be diffuse or localized. In the diffuse type the uterus is slightly symmetrically enlarged and firm. It rarely exceeds the size of 12 weeks pregnancy. Occasionally, there is a localized area of endometriosis causing irregular enlargement of the uterus. On cut section the myometrium is thickened and shows a whorled appearance like that of a myoma but without a capsule.
- The presence of endometrial glands leads to proliferation of muscle and connective tissue fibres.
- Small darkbrown spots are seen between the muscle fibres which are endometrial glands distended with blood.
- Sometimes the endometrial glands do not contain blood as the lesion arises from the basal endometrium which does not always respond to ovarian hormones due to lack of progesterone receptors.
- The cavity of the uterus is enlarged and the endometrium is thick and hyperplastic
- asymptomatic
- Menorrhagia
- Dysmenorrhoea. It is a special typeof dysmenorrhea which is progressive (crescenddysmenorrhoea). However, special type of dysmenorrhoe maybe absent in some case of adenomyosis.

INVESTIGATIONS:

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

Presentation:

- CLINICAL PICTURE
- Age. Most cases are seen in patients aged 40-50 years.
- Parity. Most of the cases (80%) are parous women.
- Social and economic state. More common among the lower classes.
- Associated lesions. Fibroids (in 50% of cases), endometriosis in other sites (10%)and endometrial hyperplasia

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.

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.**

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.
- The commonest site for external endometriosis is the ovary (75% of cases) and the next common site is the peritoneum of Douglas pouch.
- 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.