

Endometriosis



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Endometriosis: overview

- + Endometriosis is the presence of endometrial-like tissue outside the uterine cavity. (glands & stroma)
- + It is oestrogen dependent, and therefore mostly affects women during their reproductive years.
- + If the ectopic endometrial tissue is within the myometrium itself it is called **ADENOMYOSIS**.

Aetiology

The exact aetiology remains unknown, various theories exist, but none accounts for all aspects of endometriosis.

- + ***Retrograde menstruation*** with adherence, invasion, and growth of the tissue (*Sampson*): most popular theory; however, >90% show menstrual blood in pelvis at time of menstruation.
- + ***Metaplasia*** of mesothelial cells (*Meyer*).
- + Systemic and lymphatic spread (*Halban*).
- + Impaired immunity (*Dmowski*).

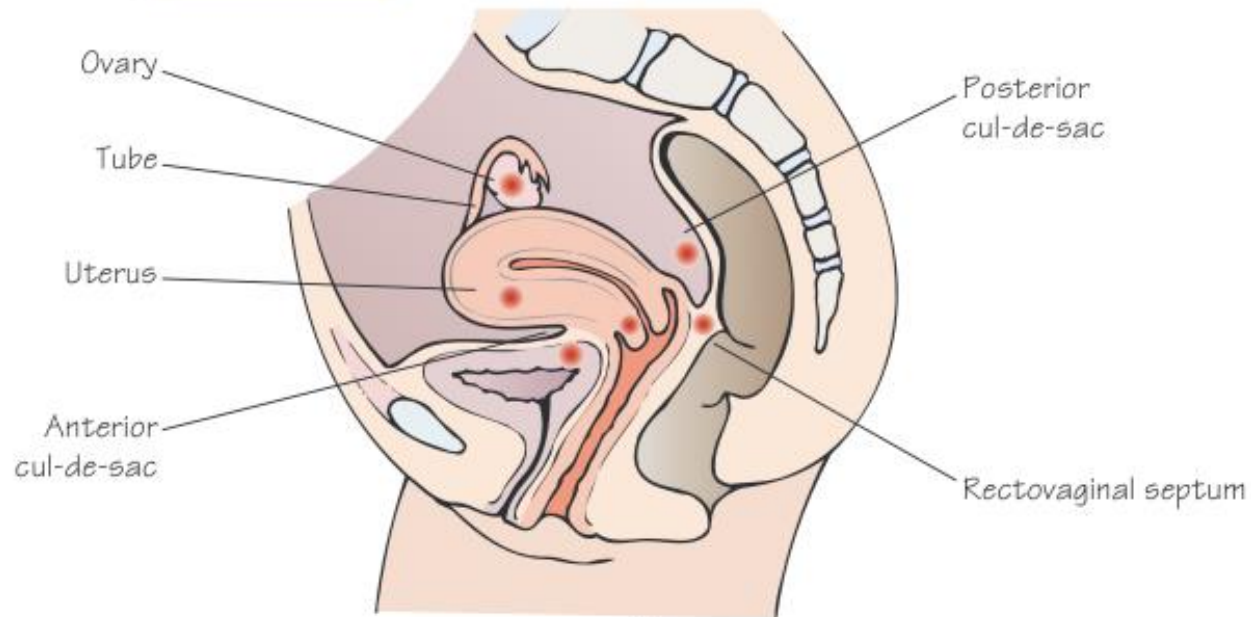
Incidence of endometriosis

- + • *General female population: 10–12% (estimated).*
- + • *Infertility investigation: 20–50%.*
- + • *Sterilization: 6%.*
- + • *Chronic pelvic pain investigation: 20–50%.*
- + • *Dysmenorrhea: 40–60%.*

Typical presentation of endometriosis (often combination)

- + Infertility.
- + Pain (often chronic pelvic pain): cyclic or constant (ectopic endometrial tissue undergoes same cycle, causing repeated inflammation, which may result in the formation of adhesions)
- + Severe dysmenorrhoea (can be due to adenomyosis)
- + Dyspareunia (deep; indicates possible involvement of uterosacral ligaments)
- + Dysuria (involvement of bladder or Peritoneum or invasion into bladder)
- + dyschezia and cyclic pararectal bleeding (for rectovaginal nodules with invasion of rectal mucosa)
- + chronic fatigue.
- + Pain symptoms are often non-specific, resulting in the delay of the diagnosis by up to 12yrs.
- + In 2–50% of cases there are no symptoms!

COMMON SITES OF ENDOMETRIOSIS



AMERICAN FERTILITY SOCIETY (AFS) CLASSIFICATION OF ENDOMETRIOSIS

Points assigned for each lesion visualized at surgery

Stage I (minimal) 1–5 points

Stage II (mild) 6–15

Location of Endometriosis

Common sites

- + Pelvis (most common):
- + Pouch of Douglas
- + Uterosacral ligaments
- + Ovarian fossae
- + Bladder
- + Peritoneum.

Rare sites

- + Lungs.
- + Brain.
- + Muscle.
- + Eye.
- + Endometriosis has been described in girls prior to menarche, and in men.

Appearance of Endometriosis

- + ***Peritoneal endometriotic lesions:*** appear as minuscule (powder burn) to 1–2cm lesions (red, bluish, brown, black, white; vesicular, cystic, petechial).
- + ***Ovarian endometriotic cysts:*** endometriomas can be >10cm in size usually filled with brownish fluid ('chocolate cysts'; old blood and tissue)
- + often associated with local fibrosis and adhesions.
- + ***Deep infiltrating endometriosis:*** rectovaginal nodules can frequently result in fibrosis of surrounding tissue. Often have solid appearance.

Endometriosis: Diagnosis

- + History
- + Menstrual cycle.
- + Nature of the pain: site ,relationship to cycle (mid cycle/dysmenorrhoea)
- + Deep dyspareunia.
- + Haematuria or rectal bleeding during menstruation.

Examination

- + Bimanual pelvic examination for:
 - + Adnexal masses (endometriomas) or tenderness
 - + Nodules/tenderness in the posterior vaginal fornix or uterosacral
 - + Ligaments
 - + Fixed retroverted uterus
 - + Rectovaginal nodules.
- + Speculum examination of vagina and cervix (rarely, lesions may be visible).

Investigations

- + Transvaginal USS:
 - endometriomas
 - possibly for endometriosis of urinary bladder or rectum.
- + Laparoscopy with biopsy for histological verification:
 - + especially important for deep infiltrating lesions
 - + positive is confirmative, negative does not rule it out
 - + endometriomas >3cm should to be resected to rule out malignancy
 - + (rare).

Investigations

Indications for laparoscopy:

- + NSAID-resistant lower abdominal pain/dysmenorrhoea
 - + pain resulting in days off work/school or hospitalization
 - + pain and infertility investigation.
-
- + MRI, intravenous urography (IVU), or barium enema (to assess extent of rectovaginal, bladder, ureteric, or bowel involvement).
 - + Serum CA125 is sometimes elevated with severe endometriosis, but there is no evidence that it is a useful screening test for this condition

Grading of Endometriosis

+ *Location*

- Peritoneal.
- Ovarian.
- Pouch of Douglas.

+ *Size*

- <1cm.
- 1–3cm.
- >3cm.

Depth of infiltration •
Superficial. • Deep.

+ *Adhesions*

- Filmy or dense.
- Extent of enclosure (<1/3; 1/3–2/3, >2/3).

Colour and form.

Stages of endometriosis

- + The points are added up and the stage of endometriosis is graded accordingly:
 - *Stage I*: Minimal endometriosis (1–5 points).
 - *Stage II*: Mild endometriosis (6–15 points).
- + • *Stage III*: Moderate endometriosis (16–40 points). • *Stage IV*: Severe endometriosis (>40 points).

Figure 11.2 AMERICAN FERTILITY SOCIETY (AFS) CLASSIFICATION OF ENDOMETRIOSIS

Points assigned for each lesion visualized at surgery

Endometriosis		<1 cm	1-3 cm	>3 cm
Peritoneum	Superficial	1	2	4
	Deep	2	4	6
Ovary	R Superficial	1	2	4
	R Deep	4	16	20
	L Superficial	1	2	4
	L Deep	4	16	20
Posterior cul-de-sac obliteration		Partial 4	Complete 40	
Adhesions		<1/3 enclosure	1/3-2/3 enclosure	>2/3 enclosure
Ovary	R Filmy	1	2	4
	R Dense	4	8	16
	L Filmy	1	2	4
	L Dense	4	8	16
Tube	R Filmy	1	2	4
	R Dense	4	8	16
	L Filmy	1	2	4
	L Dense	4	8	16

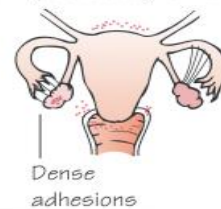
Stage I (minimal) 1-5 points



Stage II (mild) 6-15 points



Stage III (moderate) 16-40 points



Stage IV (severe) >40 points



Endometriosis: treatment

- + The approach should be determined by:
 - Reason for treatment (pain or fertility).
 - Side effect profile.
 - Cost-effectiveness of each drug.
- + All drugs are equally effective in relieving pain and are associated with up to 50% recurrence after approximately 12–24mths after stopping.
- + It is acceptable to treat women empirically with progestagens or COCP without a laparoscopic diagnosis.
- + Combined hormonal contraceptives, ideally administered continuously, should be considered as first-line agents.
- + NSAIDs are effective and may be used with hormonal drugs.
- + Severe cases of endometriosis should be referred to a centre with expertise in advanced laparoscopic surgery.

Treatments for pain

Medical treatment

Surgical treatment .

- + Surgical management indicated once medical treatment has failed.
- + Postoperative 6mths treatment with GnRH analogues is effective in delaying recurrence at 12 and 24mths.
- + Coagulation, excision, or ablation are recommended surgical techniques and should be done by laparoscopy.
- + As a last resort hysterectomy may be considered in patients with severe, treatment refractory dysmenorrhoea: if performed, bilateral oophorectomy should be considered with add-back HRT.

Medical Treatment For Pain From Endometriosis

DRUGS	Applications/ duration	Effect	Side effects
COCP	Continuous >> cyclic Long term	Ovarian suppression	Headaches Nausea DV/Stroke
Medroxy- progesterone acetate or other progestagens	Orally or IM/SC injection (depot) Long term	Ovarian suppression	Weight gain Bloating Acne Irregular bleeding Depression
GnRH analogues	2nd line therapy SC/IM injection or nasal spray Short or long term Should never be used without add-back HRT	Ovarian suppression	Loss of bone density (reversible) Hot flushes Vaginal dryness Headaches Depression
Levonorgestrel- releasing IUD	Intrauterine Long term (change every 5yrs if age <40)	Endometrial suppression; sometimes Ovarian suppression	Irregular bleeding Spontaneous expulsion
Danazol	Oral 6mths (longest experience)	Ovarian suppression	Acne Hirsutism Irreversible voice changes
Aromatase inhibitors		Local oestrogen suppression in endometrial lesion	Ovarian cysts Loss of bone density (reversible)

Treatments for Subfertility

- + *Medical treatment* :No medical treatment can improve fertility in endometriosis patients.
- + *Surgical treatment*
 - + Spontaneous pregnancy rate after surgical removal of endometriotic lesions is probably in minimal/mild endometriosis.
 - + Unclear efficacy for moderate/severe disease as no RCTs exist.
 - + Endometriomas (≥ 3 cm) should be removed: best by cystectomy rather than drainage to d recurrence rates.

- + Fertility-sparing surgery should be the goal, to increase chance of spontaneous conception.
- + Moderate to Severe disease, IVF may be the treatment of choice.

THANK YOU