University of Basrah
Al-Zahraa Medical College

Ministry of higher Education
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REPRODUCTIVE BLOCK

Lecture

Duration : 1 hour

ENDOMETRIOSIS

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GYNAECOLOGY 20th
EDITION by Ten Teachers

Learning Objectives (LO)

1- Background on endometriosis .
2- Incidence and Etiology of endometriosis .
3- Genetic and immunological factors of endometriosis .
4- Vascular and lymphatic spread endometriosis .
5- Sites and clinical features of endometriosis .
6- Endometriosis and infertility .
7- Physical exam. , diagnosis and biomarkers of endometriosis .
8- Management of endometriosis .

LO 1
Endometriosis

- **Endometriosis is a common condition that is defined as endometrial tissue lying outside the uterine cavity .**
- **Endometriotic tissue responds to cyclical hormonal changes and therefore undergoes cyclical bleeding and local inflammatory reactions. These regularly repeated episodes of bleeding and healing lead to fibrosis and adhesion formation between pelvic organs, causing pain and infertility.**
- **In extreme cases a 'frozen pelvis' results, where extensive adhesions tether the pelvic organs and obliterate normal pelvic anatomy .**

LO 2
Incidence

- **Endometriosis occurs in approximately 5–10% of women of reproductive age.**
- **It is found in at least one third of women undergoing a diagnostic laparoscopy for pelvic pain or infertility.**

Aetiology

- **The aetiology of endometriosis is unknown although there are several theories**

- **Sampson's implantation theory:**

- **postulates that it is this retrograde menstrual regurgitation of viable endometrial glands and tissue along patent Fallopian tubes, and that subsequent implantation on the pelvic peritoneal surface causes endometriosis**

- **Meyer’s ‘coelomic metaplasia’ theory:**

- **describes the dedifferentiation of peritoneal cells lining the Müllerian duct back to their primitive origin, which then transform into endometrial cells.**

LO 3
Genetic and immunological factors

- **There appears to be an increased incidence in first-degree relatives of patients with the disorder and racial differences, with increased incidence among oriental women and a low prevalence in women of Afro-Caribbean origin.**

LO 4
Vascular and lymphatic spread

- **Vascular and lymphatic embolization to distant sites has been demonstrated and explains the rare findings of endometriosis in sites outside the peritoneal cavity, such as the lung.**

LO 5
SITES

- **It is usually found within the pelvis, being commonly located on the peritoneum lining the pelvic side walls, pouch of Douglas, uterosacral ligaments and bladder.**
- **found infiltrating into deeper tissue such as the rectovaginal septum When endometrial tissue is implanted into the ovary an endometrioma forms frequently referred to as a ‘chocolate cyst’.**
- **Less commonly, endometriotic deposits can be found in other sites such as umbilicus, abdominal scars and the pleural cavity.**

Clinical features

- **Classical clinical features are severe cyclical non-colicky pelvic pain**
- **heavy menstrual loss**
- **chronic non-cyclical**
- **pelvic pain and severe fatigue.**
- **Deep pain with intercourse (deep dyspareunia) and on defaecation (dyschezia) are key indicators of the presence of endometriosis deep within the pouch of Douglas.**
- **cyclical rectal bleeding**
- **dysuria**

LO 6
Endometriosis and infertility

- **It is estimated that between 30% and 40% of patients with endometriosis complain of difficulty in conceiving.**

Ovarian function	Luteolysis caused by prostaglandin F2
	Oocyte maturation defects
	Endocrinopathies
	Luteinized unruptured follicle syndrome
	Altered prolactin release
	Anovulation
Tubal function	Impaired fimbrial oocyte pick-up
	Altered tubal mobility
Coital function	Deep dyspareunia – reduced coital frequency
Sperm function	Antibodies causing inactivation
	Macrophage phagocytosis of spermatozoa
Early pregnancy failure	Prostaglandin induced Immune reaction Luteal phase deficiency

possible mechanism for infertility with endometriosis

LO 7
Physical examination

- **thickening or nodularity of the uterosacral ligaments**
- **an adnexal mass or a fixed retroverted uterus**

Diagnosis

Ultrasound

- **TVUSS can detect endometriosis involving the ovaries (endometriomas or chocolate cysts) but its use in diagnosing smaller lesions is limited, In women with symptoms and signs of rectal endometriosis, TVUSS may be useful for identifying rectal disease, although again a negative scan does not exclude the disease**

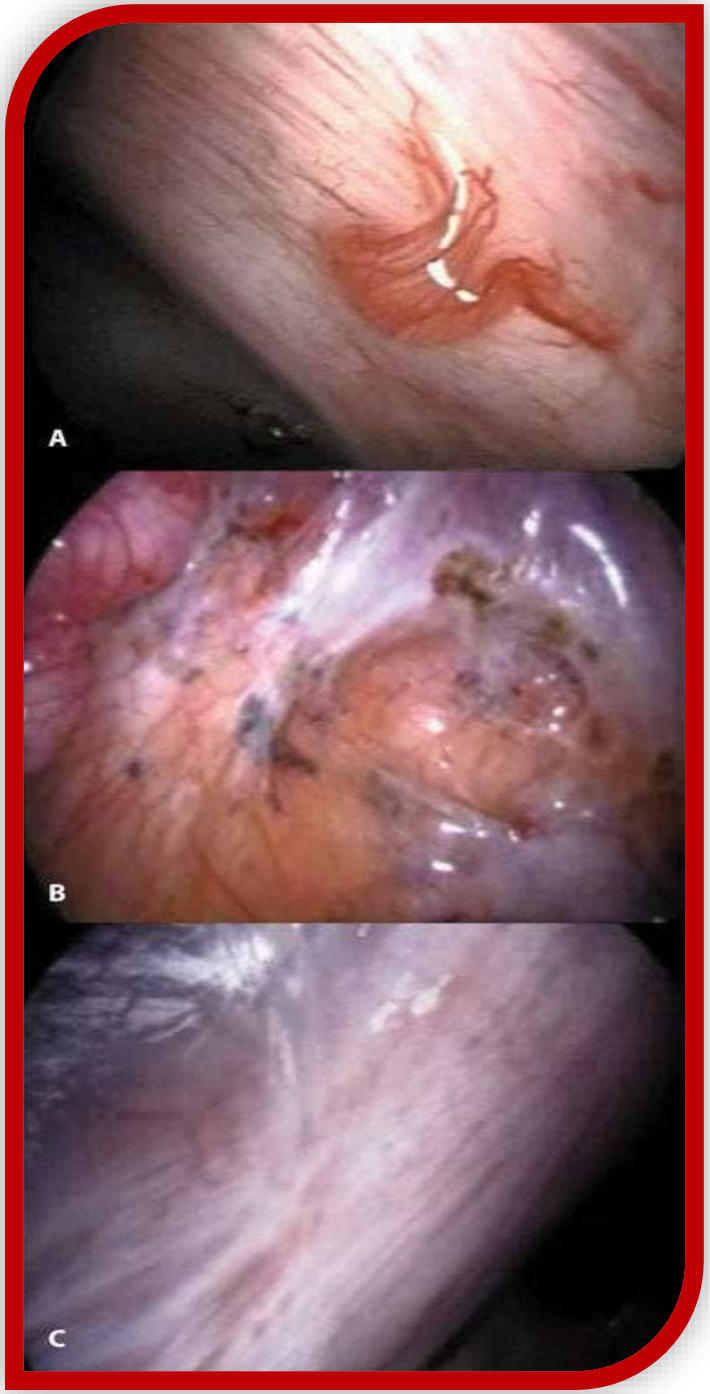
Magnetic resonance imaging

- **MRI can detect lesions >5 mm in size, particularly in deep tissues, for example the rectovaginal septum. This can allow careful presurgical planning in difficult cases.**

Laparoscopy

- **allows lesions to be biopsied for histological confirmation of diagnosis , staging of the disease and The patency of the Fallopian tubes can also be checked.**

laproscopic appearance of endometriosis



Biomarkers

- **There has been recent interest in the diagnosis of endometriosis using immunological biomarkers, such as CA125, in plasma, urine or serum. However, to date these non-invasive diagnostic approaches are too inaccurate for use in clinical practice.**

LO 8
Management

Medical therapy

- **Analgesics : Non-steroidal anti-inflammatory drugs (NSAIDs) are potent analgesics and are helpful in reducing the severity of dysmenorrhoea and pelvic pain. However, they have no specific impact on the disease and hence their use is for symptom control only**
- **Combined oral contraceptives : In the absence of contraindications or desire for pregnancy, the COCP should be considered because it has been shown to reduce endometriosis-associated dyspareunia, dysmenorrhoea and non-menstrual pain as well as providing cycle control and contraception . The COCP can be taken sequentially with the usual 7-day pill-free break or taken continuously without a break, inducing amenorrhoea.**

- **Progestogens :** In those where there are risk factors for the use of a COCP, progestogens should be used to induce amenorrhoea. The long-acting reversible contraceptives (LARCs), depot-medroxyprogesterone acetate and the levonorgestrel intrauterine system (LNG-IUS) (Mirena®) are particularly useful in providing a long-term therapeutic effect particularly after surgical treatment

- **Gonadotrophin-releasing hormone agonists :** They are available as multiple, daily-administered intranasal sprays but are usually administered as slow-release depot formulations, each lasting for 1 month or more. Long-term use over 6 months is precluded because drug-induced osteoporosis results The recurrence of symptoms on cessation of therapy is usually rapid.

Surgical treatment

- **Fertility-sparing surgery :** **Most surgery for endometriosis can be achieved laparoscopically. Symptomatic endometriotic chocolate cysts should not just be drained but the inner cyst lining should be excised to reduce the risk of recurrence; Deposits of superficial peritoneal endometriosis can be easily ablated or excised during laparoscopy using diathermy or laser energy.**

- **Specialist surgery is needed to treat endometriosis where the disease has caused extensive adhesions distorting normal pelvic anatomy or involved other organs such as the rectum, large bowel or bladder, or when there are rectovaginal nodules of disease**

- **Hysterectomy and oophorectomy :** Hysterectomy with removal of the ovaries and all visible endometriosis lesions should be considered only in women who have completed their family and failed to respond to more conservative treatments.

- **Adenomyosis :** The endometrium is usually well demarcated from the underlying myometrium. Adenomyosis is a disorder in which endometrial glands and stroma are found deep within the myometrium Adenomyosis can only be definitively diagnosed following histopathological examination of a hysterectomy specimen, where it is identified in 40% of uteri from a general female population of reproductive age.

- This ectopic endometrium is responsive to cyclical hormonal changes that result in bleeding within the myometrium, leading to increasingly severe secondary dysmenorrhoea (pain throughout menses), uterine enlargement and HMB.

THANK YOU