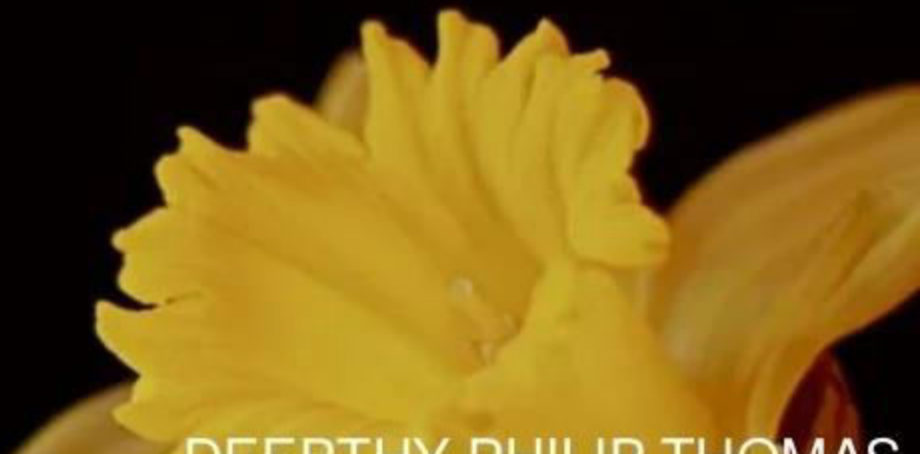
ENDOMETRIOSIS

Your Uterus wants you to know:

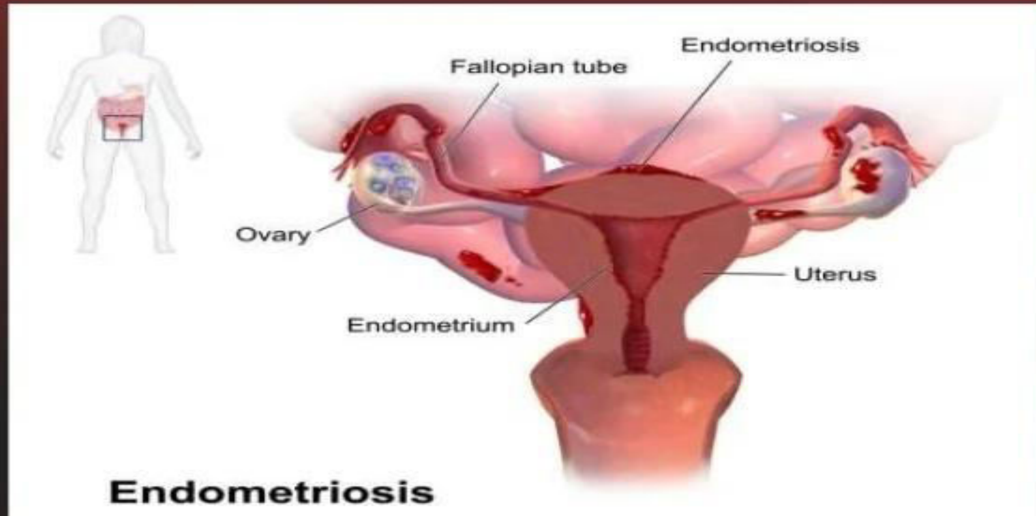
March is Endometriosis

Awareness Month



DEFINITION

- The presence of functioning endometrium (glands and stroma) in sites other than uterine mucosa is called endometriosis.



SITES

- ***Extra-abdominal***

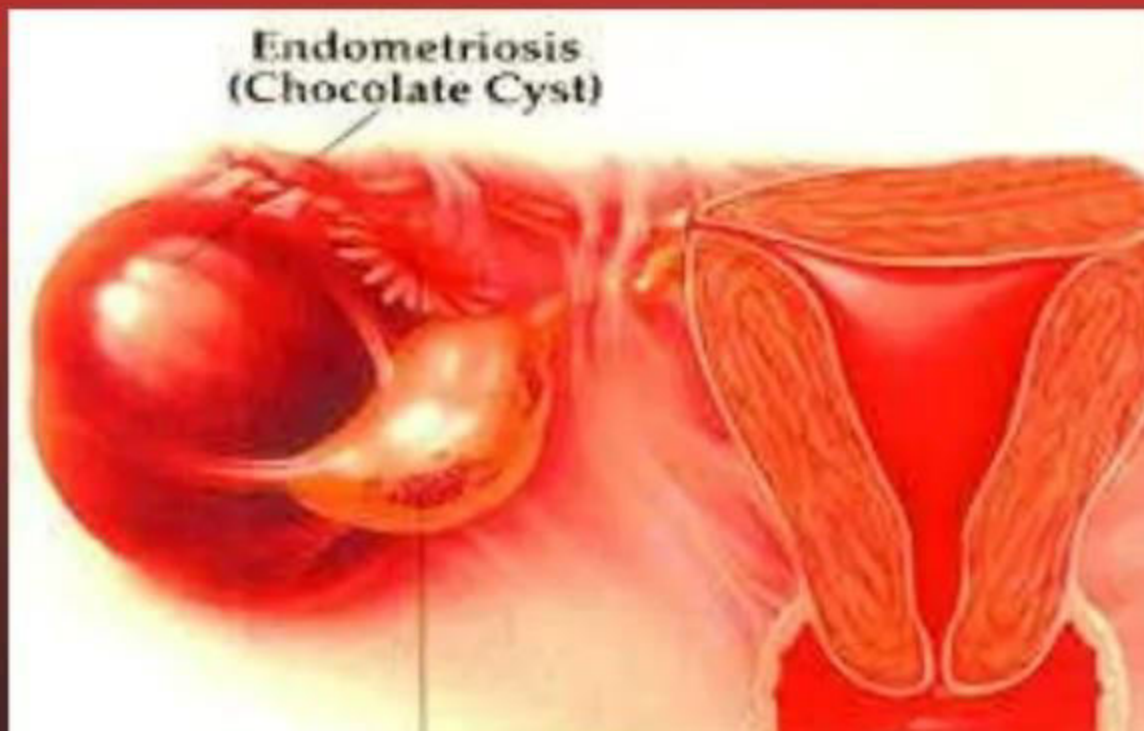
  abdominal scar of hysterotomy, caesarean section, tubectomy and myomectomy, umbilicus, episiotomy scar, vagina and cervix.

SITES

- . ***Remote sites***
- They are pleura, lungs, deep tissues of arms and thighs.

- **Most common sites:**
- Ovary
- POD
- Uterosacral ligament
- Rectovaginal septum
- Sigmoid colon
- Abdominal scar following hysterotomy.

Ovarian endomeriosis



Ovarian endomeriosis

- may be either superficial or deep
- The small superficial dark bluish cysts contain altered blood and from these the escape of small quantities may result in the formation of adhesions to surrounding structures. When the adhesions are broken down the cysts are

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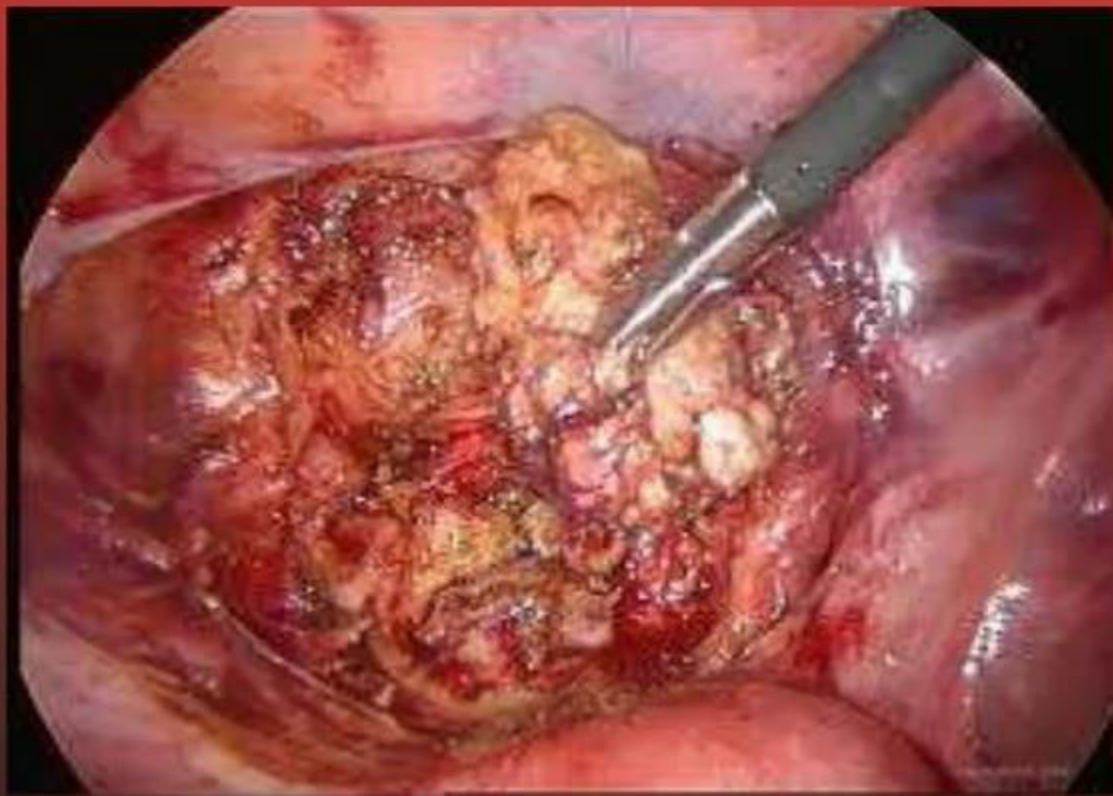
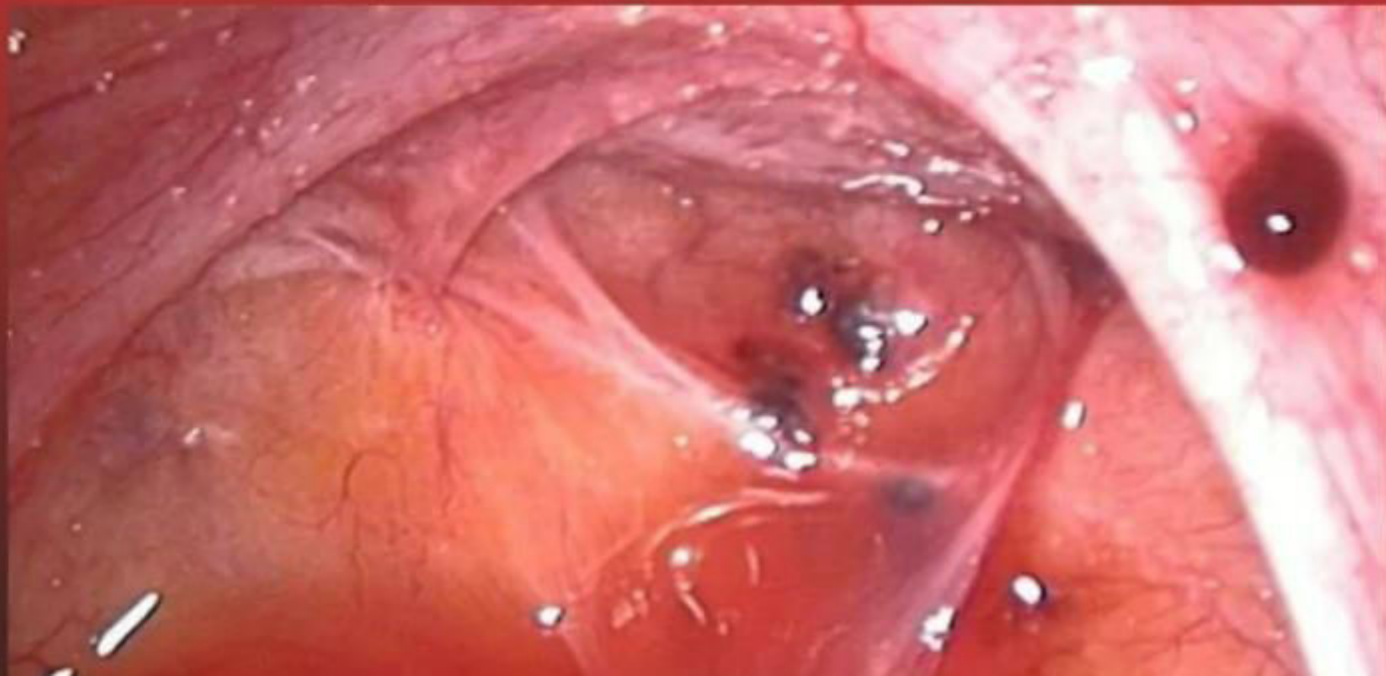
Bowel endometriosis



The rectum is involved, most commonly at the rectovaginal septum, the lesions being seen on the peritoneal surface and in the muscular layers but rarely involving the mucosa. Patients usually present with abdominal pain and pelvic discomfort

obstruction may be partial or complete due to fibrosis affecting that wall of the bowel, most commonly seen in the ileal region and the sigmorectal junction.

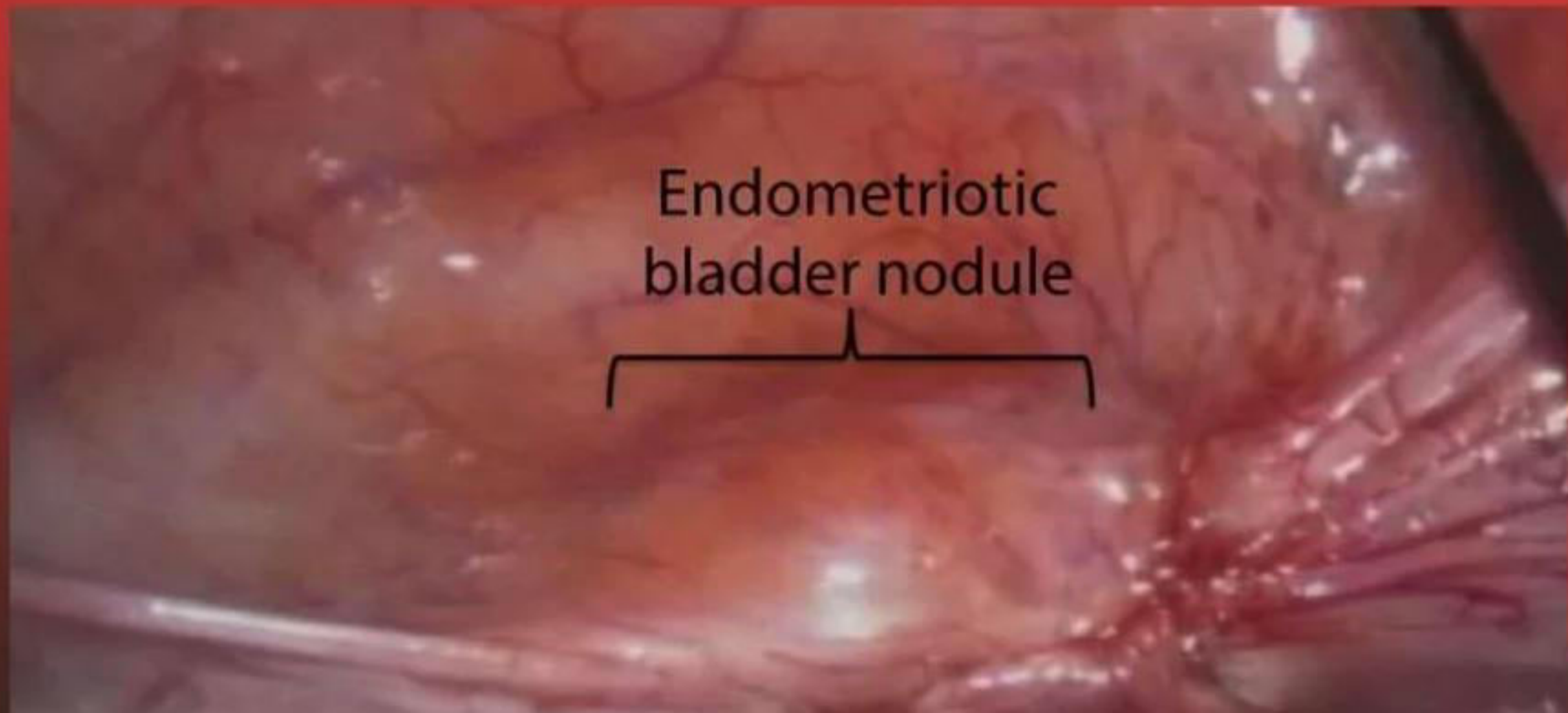
Lower genital tract endometriosis



Lower genital tract endometriosis

cervix and vagina are bluish in colour and usually cystic. There is tenderness on palpation, especially during menstruation. The referable symptoms are dyspareunia, dysmenorrhoea and perhaps bleeding

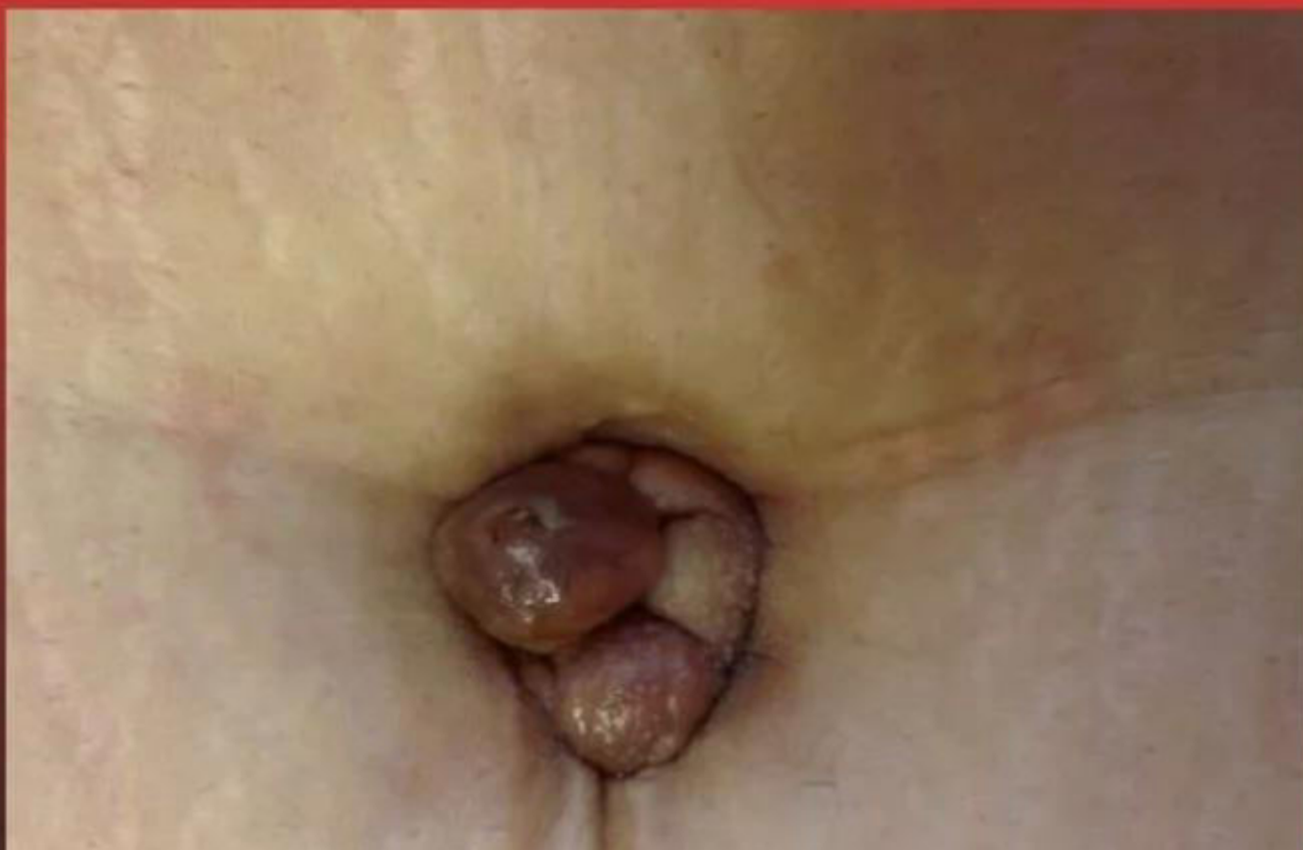
Urinary tract endometriosis



Urinary tract endometriosis

- may be seen on cystoscopy, may occur with associated symptoms of frequency, dysuria, haematuria and abdominal pain.

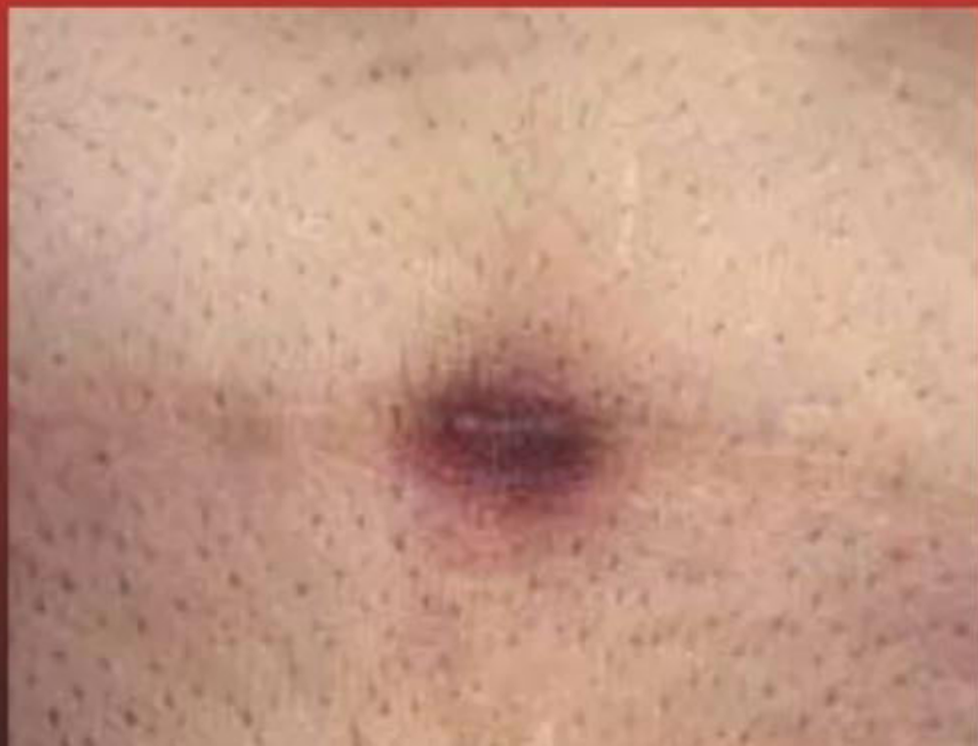
Umbilical endometriosis



Umbilical endometriosis

- usually presents as cyclical umbilical pain with a blue discoloration at the time of menstruation. Treatment is by excision.

Endometriosis in scars



- A swelling in a laparotomy or caesarean section scar is painful and tender, especially during menstruation

Other sites

Spread to the inguinal region by means of the round ligament has been reported and deposits have been found in the limbs when painful swellings have been excised. Haemoptysis may be the first sign of pulmonary endometriosis, especially when it is

PATHOPHYSIOLOGY AND ETIOLOGY

- **Retrograde menustration (sampson's theory)**

  first to suggest that menstrual bloo containing fragments of endometrium migh pass along the fallopian tubes in a retrograd manner and thus reach the peritoneal cavity.

- **Coelomic metaplasia theory (mayer and ivanoff)**
- Chronic irritation of the pelvis peritoneum by this menstrual blood may cause coelomic metaplasia which results in endometriosis.
- Alternatively the mullerian tissue remnants may be trapped within the peritoneum.
- undergo metaplasia and be transformed into

- Direct implantation

According to the theory, the endometrial or decidual tissues start to grow in susceptible individual when implanted in the new sites. Such sites are abdominal scar following hysterectomy, caesarean section, tubectomy and myomectomy.

Endometriosis at the episiotomy scar,

- **Lymphatic and vascular dissemination (Halban)**
- It may be possible for the normal endometrium to metastasise the pelvic lymph nodes through draining lymphatic channels of the uterus. This could explain the lymph node involvement.

PATHOGENESIS

- The endometrium in the ectopic sites has got the potentiality to undergo changes under the action of ovarian hormones

- While proliferative changes are constantly evidenced, the secretory changes are

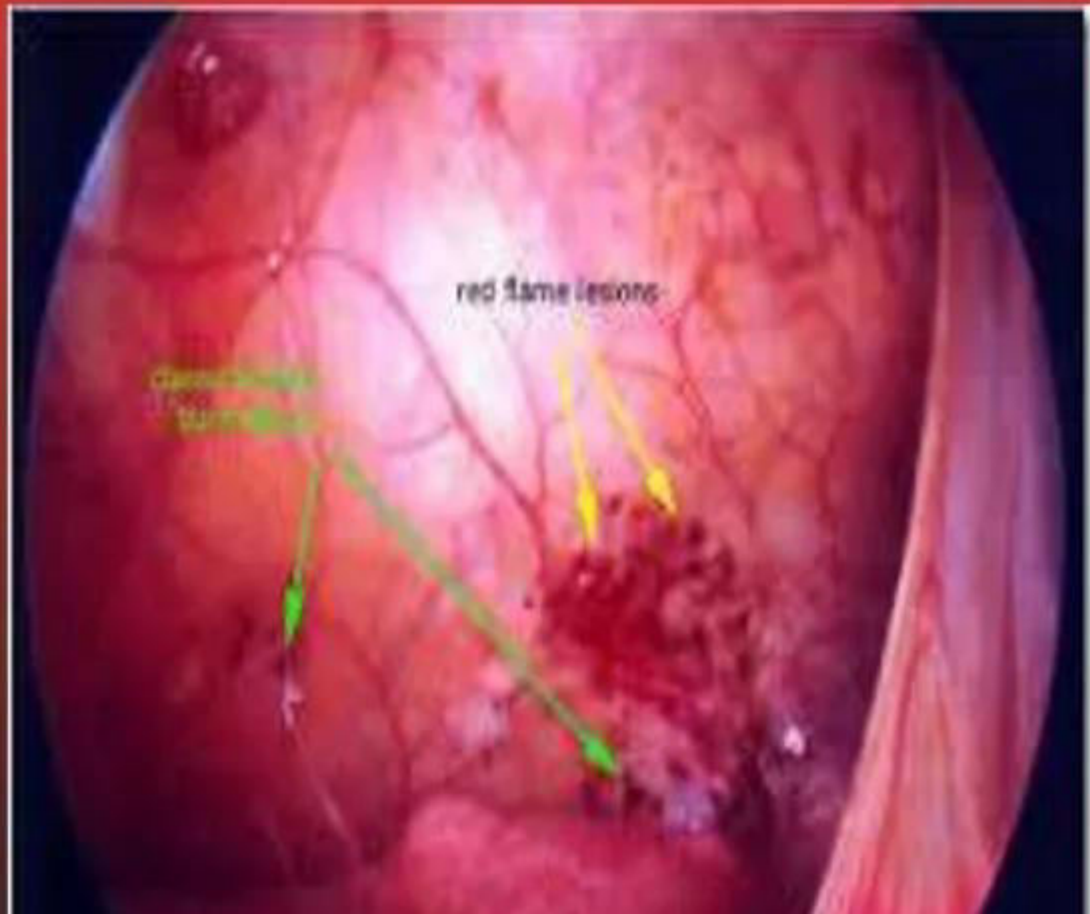
- Cyclic growth and shedding continue till menopause. The periodically shed may remain encysted or else, the cyst becomes tense and ruptures.

- As the blood is an irritant, there is dense tissue reaction surrounding the lesion with fibrosis. If it happens to occur on the pelvic peritoneum, it

- If encysted, the cyst enlarges with cyclic bleeding. The serum gets absorbed between the periods and the content inside becomes chocolate coloured. Hence the cyst is called chocolate cyst which commonly located in the ovary

Pelvic endometritis

- Typically there are small black dots, the so called powder burns seen on the uterosacral ligaments and pouch of Douglas. Fibrosis and scarring in the peritoneum surrounding the implants is also a typical finding. Other subltle appearances are: red flame shaped areas, red polypoid areas, yellow brown patches, white


red flame lesions

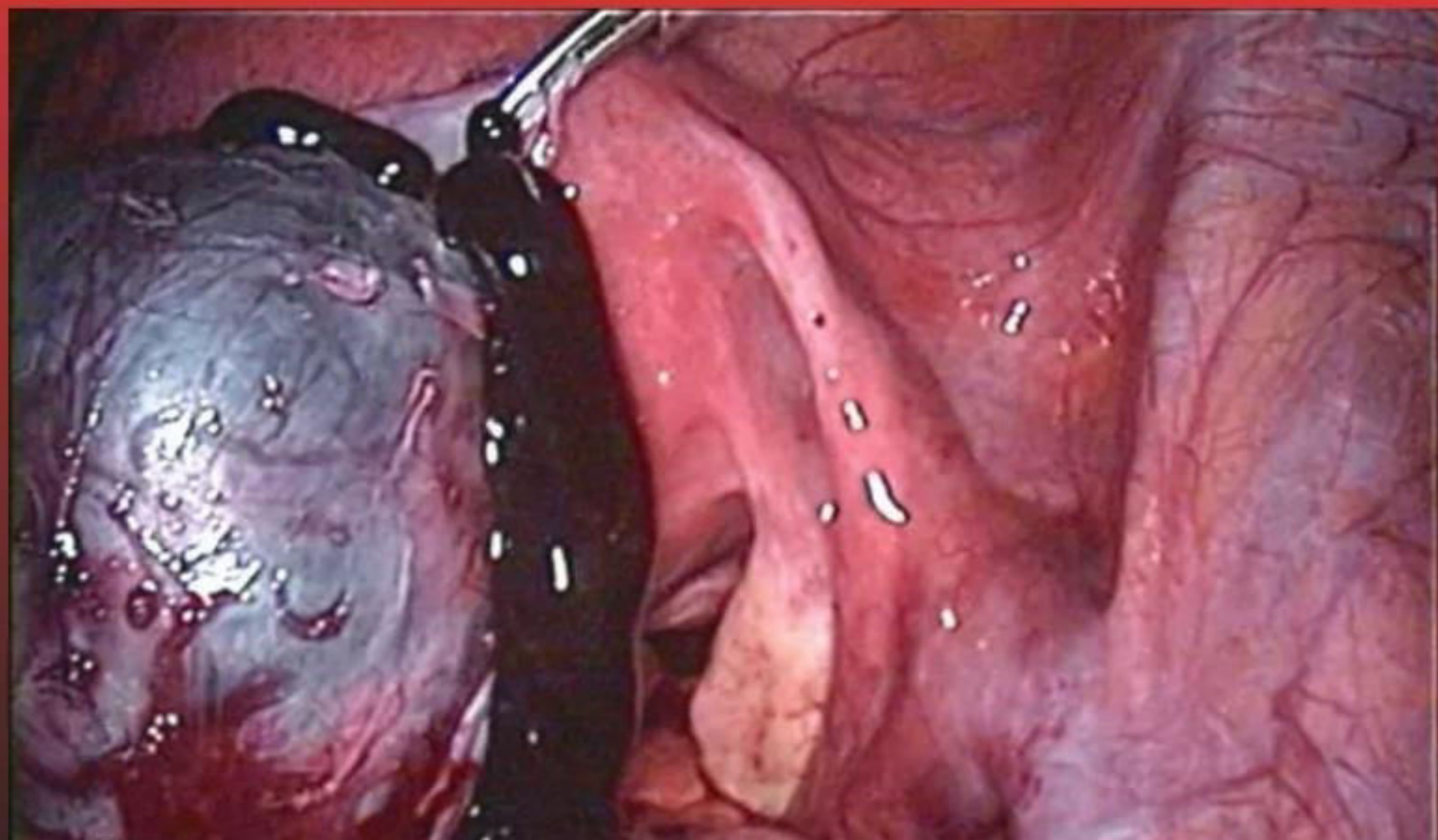
Peritoneal endometriosis

- Red endometriosis which is characterized by numerous proliferative glands with a columnar or pseudo-stratified epithelium and the glandular component of these lesions has very similar appearances to that of normal endometrium. The red appearance is brought about by the likely recent implantation of

Ovarian endometriosis

- likely that the endometrial deposit becomes invaginated into the surface of the ovary or it may be that an inflammatory response to the surface of the ovary leads to adhesion formation

- The recurrent shedding of the endometriosis within the ovarian invagination leads to cystic formation with menstrual blood collecting over a period of time, thereby leading to increasing chocolate cyst formation.



Rectovaginal endometriosis

- This form of the disease occurs between the rectum and the vagina, and has a different histological appearance.
- These rectovaginal nodules may arise separately and through a different process to peritoneal endometriosis, as the presence of muscle cells almost requires a different origin.

CLINICAL MANIFESTATIONS

- Seen in age between 30-40
- Usually asymptomatic
- Symptoms not related to extend of lesion, sometimes minimal endometriosis can result in intense symptoms

- Depth of penetration is more related to symptoms rather than the spread. Lesions penetrating more than 5 mm are responsible for pain, dysmenorrhoea and dyspareunia.
- ‘powder burns’ lesions produce more prostaglandin F and hence more painful.

CLINICAL MANIFESTATIONS

- *Dysmenorrhoea (50%)*
- *Abnormal menstruation(60%)*
- *Infertility (40-60%)*
- *Dyspareunia:*
- *Chronic pelvic pain*

- ***Other symptoms***
- Bladder: frequency, dysuria, or even hematuria
- Sigmoid colon and rectum: painful defecation (dyschezia), diarrhea, rectal bleeding or even malena.
- Chronic aftifue, perimenstrual symptoms(

- *Abdominal examination*
- A mass may be felt in the lower abdomen arising from the pelvis- enlarged chocolate cyst or tubo ovarian mass due to endometriotic adhesions. The mass is tender with the restriced mobility.

- ***Pelvic examination***
- pelvic tenderness, nodules in the pouch of Douglas, nodular feel of the uterosacral ligaments, fixed retroverted uterus or unilateral or bilateral adnexal mass varying sizes.
- Speculum examination may reveal bluish spots in the posterior fornix
- Rectal or rectovaginal examination is often

DIAGNOSIS

- **Clinical diagnosis**

progressively increasing secondary dysmenorrhoea, dyspareunia and infertility. This is corroborated by the pelvic findings of nodules feel of the uterosacral ligaments, fixed retroverted uterus and unilateral or bilateral

- **Serum marker CA 125**
- moderate elevation with severe endometriosis
- **USG**
- TVS can detect ovarian endometriomas. Transvaginal and endorectal ultrasound are found better for rectosigmoid endometriosis
- **CT & MRI**

- **Laproscopy**

  powder burns or match stick spots on the peritoneum of the POD.

- **Biopsy**

  Confirmation of the exicised lesion is ideal but negative histology does not exclude it.

STAGING

REVISED AMERICAN SOCIETY FOR REPRODUCTIVE MEDICINE CLASSIFICATION OF ENDOMETRIOSIS 1985

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	< 1 cm	1 – 3 cm	> 3 cm
Peritoneum	Superficial	1	2	4
	Deep	2	4	6
Ovary	R Superficial	1	2	4
	Deep	4	16	20
	L Superficial	1	2	4
	Deep	4	16	20
	POSTERIOR CULDESAC OBLITERATION	Partial		Complete
		4		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

COMPLICATIONS

- Endocrinopathy
- Rupture of chocolate cyst
- Infection of the chocolate cyst
- Obstructive features
  - Intestinal obstruction
  - Ureteral obstruction
- Malignancy is rare

MANAGEMENT

- **Preventive**
- To avoid tubal pregnancy test immediately after curettage or around the time of menstruation
- Forcible pelvic examination should not be done during or shortly after menstruation
- Married woman with family history of

Curative

- **Expectant management**

  It is done in
- Minimal endometriosis with no or other abnormal pelvic finding
- Unmarried
- Young mother who are ready to start family

- Observation with administration of NSAIDS or prostaglandin synthetase inhin\biting drugs are used to relieve pain. Ibuprofen 800-1200 mg or mefanamic acid 150-600 mg a day is quite effective.
- The married women are encouraged to have conception. Pregnancy usually cures the condition.

- **Medical treatment**
- **Hormonal treatment**
- endometrial atropy is either by producing pseudopregnancy (combined oral pills) or by pseodomenopause(Danazol) or by medical oopherectomy(GnRH analogues).

- ***Combined estrogen and progestogen***
- **The low dose contrecptive pills may be prescribed either in a cyclic or continuous fashion with advantages in young patients with mild disease who want to defer pregnancy. It causes endometrial decidualization and atropy.**

- ***Progestogens***
- **It causes decidualization of endometrium and atropy. High doses may suppress ovulation and induce amenorrhoea. Oral route is commonly used. Progesterone antagonists, Mifepristone 50-100 mg /day has laos found to be effective.**

- ***Danazol***
- **It is started from the day 5 of the menstrual cycle. The dose 600-800mg daily is variable and depends upon the extent of the lesion.**

- ***<u>GnRH analogues</u>***
- **When used continuously act as medical oopherectomy,a state of hypooestrinism and amenorrhoea.**

Surgical management

Indications

- Endometriosis with severe symptoms unresponsive to hormone therapy.
- Severe and deeply infiltrating endometriosis to correct the distortion of pelvic anatomy.
- Endometriomas of more than 1cm

- ***Conservative surgery***
- Laproscopy
- electrodiatherapy or by lazer vapourization
- Laproscopic uterosacral nerve ablation (LUNA)

- ***Definitive surgery***

  It is indicated

- No prospect for fertility improvement
- Other forms of the treatment have failed
- Woman with completed family.

- Hysterectomy with bilateral salpingo-oophorectomy

- **Combined medical and surgical**

Preoperative hormonal therapy aims at reduction of the size and vascularity of the lesion which facilitate surgery.

THANK YOU