

Endometriosis

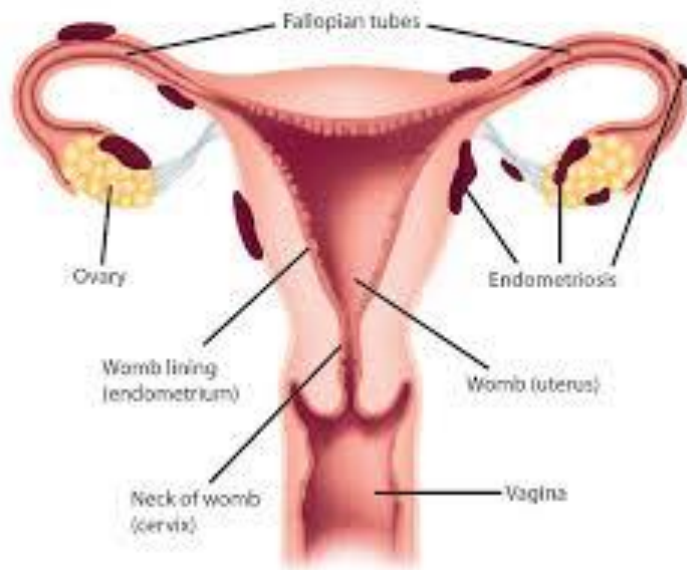
Dr Pip Walker

Outline

- ▶ Definition
- ▶ Prevalence
- ▶ Presentation and Symptoms
- ▶ Pathogenesis
- ▶ Examination
- ▶ Investigation
- ▶ Diagnosis
- ▶ Treatment
- ▶ Cases

Definition

- ▶ Endometriosis is an inflammatory condition
- ▶ Characterized by lesions of endometrial-like tissue outside of the uterus
- ▶ And is associated with pelvic pain and infertility (Giudice, 2010)



Prevalence

- ▶ Affects an estimated 176 million women of reproductive age worldwide
- ▶ 120,000 in New Zealand → 1 in 10 women in NZ
- ▶ Between 30 to 50% of Women presenting with Infertility
- ▶ Between 50 to 60% of Women presenting with Pelvic pain



Presentation and Symptoms

- ▶ The **D**'s
- ▶ **D**ysmenorrhoea - Severe period pain
- ▶ **D**ysuria - Pain passing urine
- ▶ **D**yschezia - Pain when passing a bowel motion
- ▶ **D**eep Dyspareunia - Pain with intercourse
- ▶ **D**ifficulty getting pregnant - Subfertility or infertility



Presentation and Symptoms

- ▶ Pelvic Pain
- ▶ Abnormal menstrual bleeding
 - ▶ Pre-menstrual spotting
 - ▶ Heavy menstrual bleeding
- ▶ Chronic Fatigue
- ▶ May have no symptoms

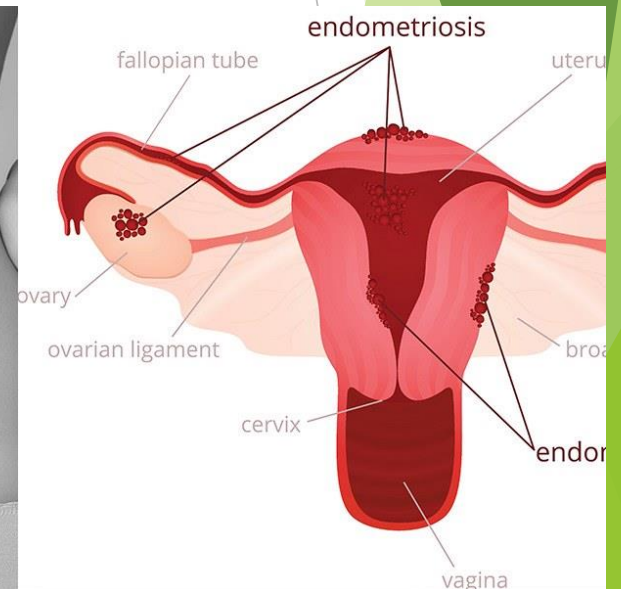


→ Severity of the symptoms does not related to severity of the disease!

Risk factors

- ▶ Early Menarche
- ▶ Short Cycles
- ▶ Heavy Menstrual Flow

- ▶ Genetics
 - ▶ First Degree Relative
 - ▶ Complex heritable trait
 - ▶ Many genes contribute to risk



Pathogenesis and Pathophysiology

Exact Aetiology Unknown...

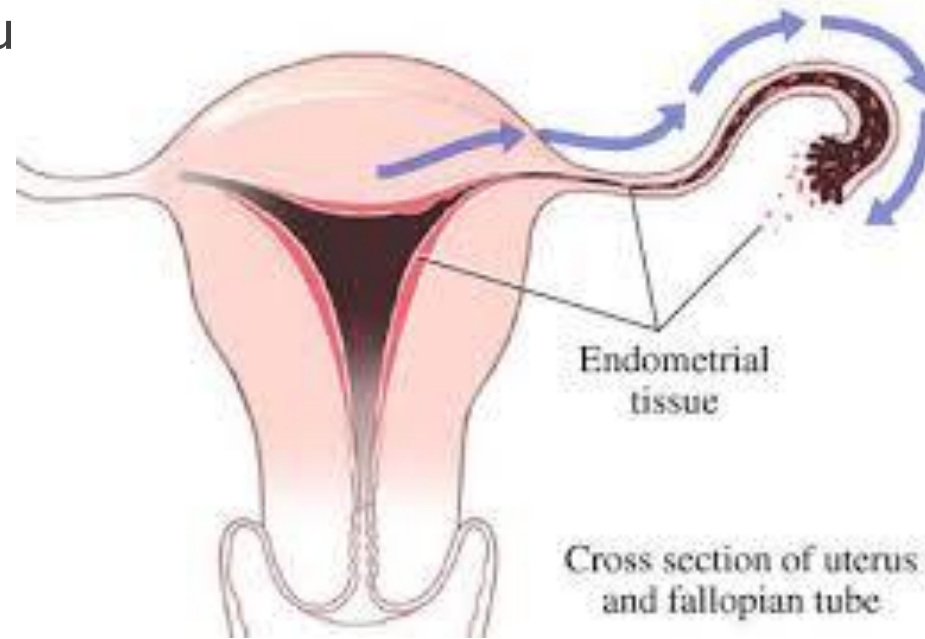
“Even after 300 years, most of the literature claims that pathogenesis and/or pathophysiology of endometriosis is still elusive...” (Khan et al., 2014)

Pathogenesis and Pathophysiology

- ▶ There are many theories!

Pathogenesis and Pathophysiology

- ▶ Retrograde menstruation
 - ▶ But 90% of women with patent tubes will have evidence of retrograde menstruation



Pathogenesis and Pathophysiology

Transformation of peritoneal cells/“Induction theory”

- ▶ Hormones or immune factors promote transformation of peritoneal cells, cells that line the inner side of your abdomen into endometrial cells.

Embryonic cell transformation

- ▶ Hormones such as estrogen may transform embryonic cells – cells in the earliest stages of development – into endometrial cell implants during puberty.

Endometrial cell transport

- ▶ The blood vessels or tissue fluid (lymphatic) system may transport endometrial cells to other parts of the body.

Immune system disorder

- ▶ A problem with the immune system may make the body unable to recognize and destroy endometrial tissue that's growing outside the uterus.

Pathogenesis and Pathophysiology

- ▶ Endometriosis has elements of a pain syndrome
- ▶ Central neurological sensitization

Pathogenesis and Pathophysiology

- ▶ Endometriosis has elements of a pain syndrome
- ▶ Central neurological sensitization

- ▶ Proliferative, estrogen-dependent disorder
- ▶ Growing evidence of progesterone resistance

Pathogenesis and Pathophysiology

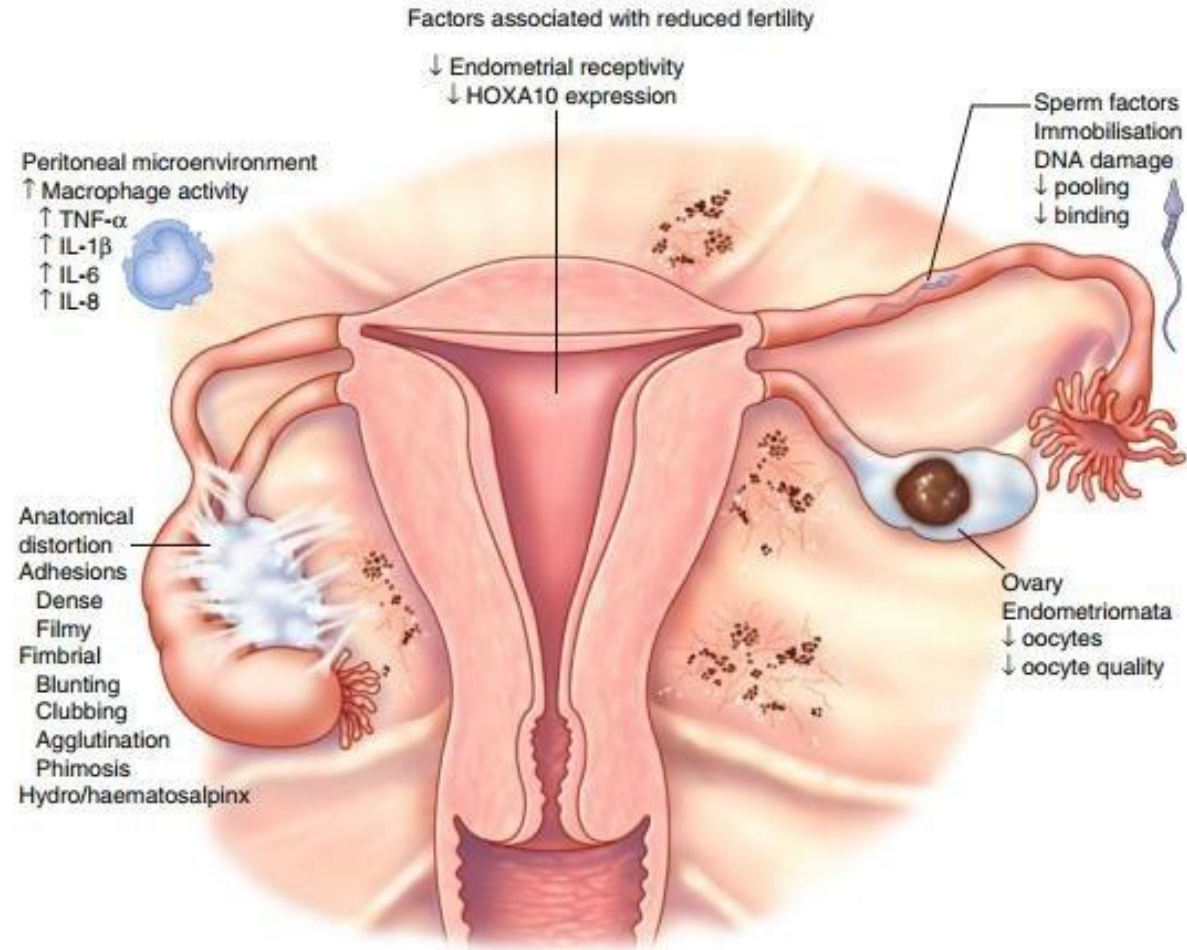
- ▶ Endometriosis has elements of a pain syndrome
- ▶ Central neurological sensitization

- ▶ Proliferative, estrogen-dependent disorder
- ▶ Growing evidence of progesterone resistance

- ▶ Generally becomes inactive with menopause
- ▶ Unless a woman uses post-menopausal hormone therapy

Pathogenesis and Pathophysiology

Infertility



Diagnosis

No reliable non-surgical test for endometriosis

There is often Delay in Diagnosis

Diagnosis

- ▶ Examination
- ▶ Imaging
- ▶ Laparoscopy is required for diagnosis



Examination

BMI

Abdomen

- ▶ Tenderness (non-specific)
- ▶ Mass
 - ▶ Endometrioma (endometriosis cyst)
- ▶ Scar endometriosis (rare)
- ▶ Umbilicus (rare)



FIGURE 1 – Endometrioma near the scar of cesarean section, with emphasis on color.

Examination

Speculum

- ▶ ‘Blue dome cysts’ may be visible in the posterior fornix



Superficial vaginal endometriotic implant



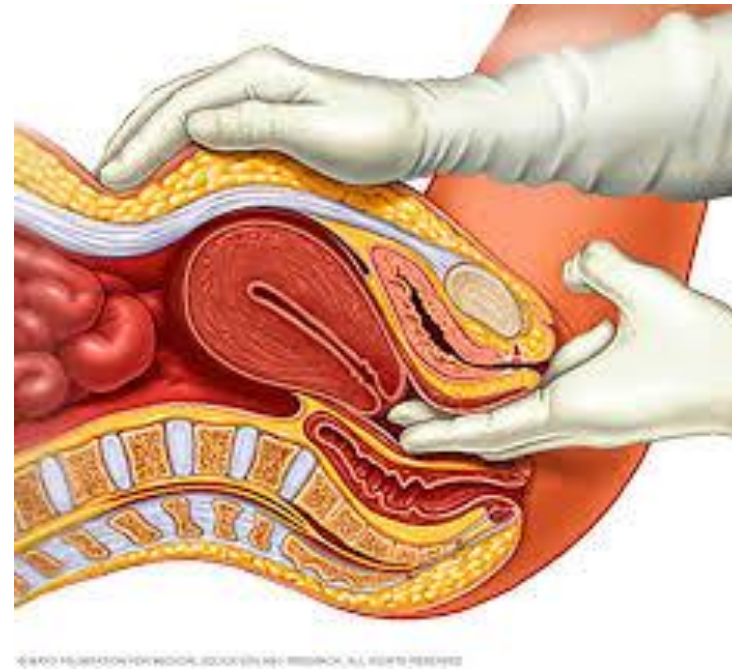
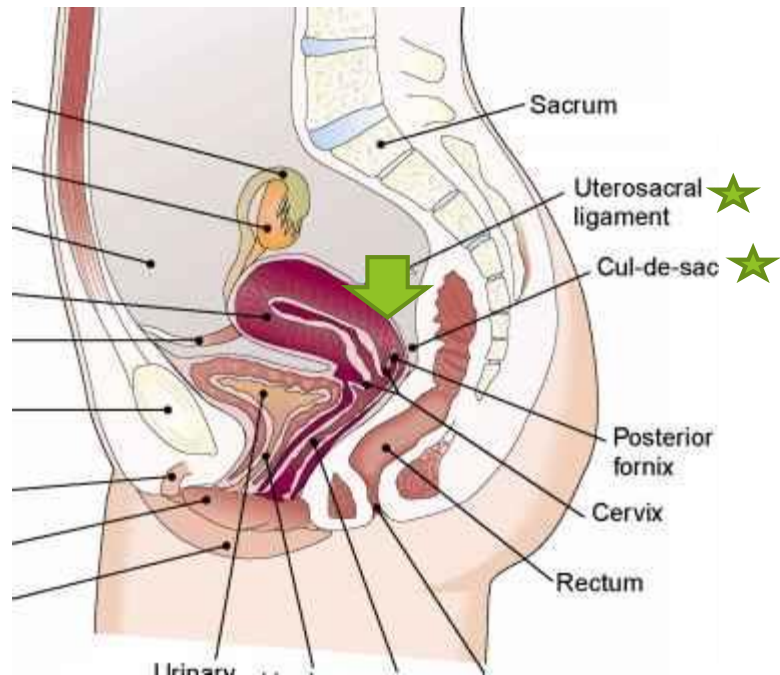
Detailed aspect of the cystic area with retained blood



Examination

Bimanual

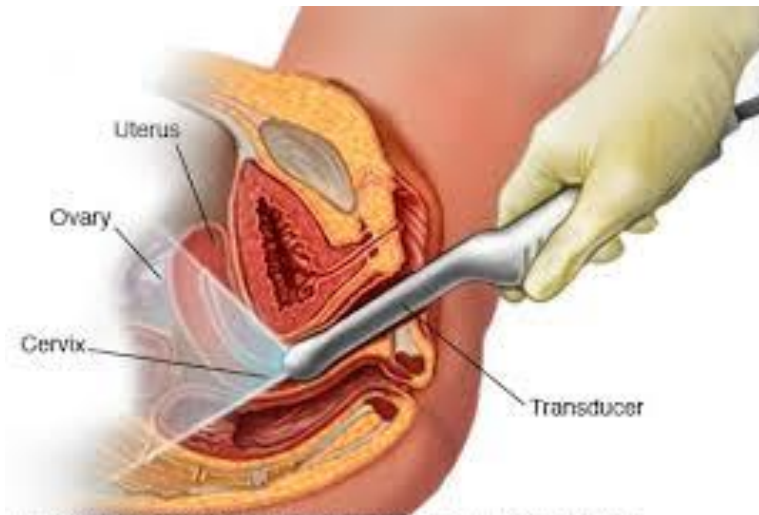
- ▶ Nodularity in the pouch of douglas or uterosacral ligaments may be felt on bimanual examination



Radiology

Pelvic USS

- ▶ TA and TV

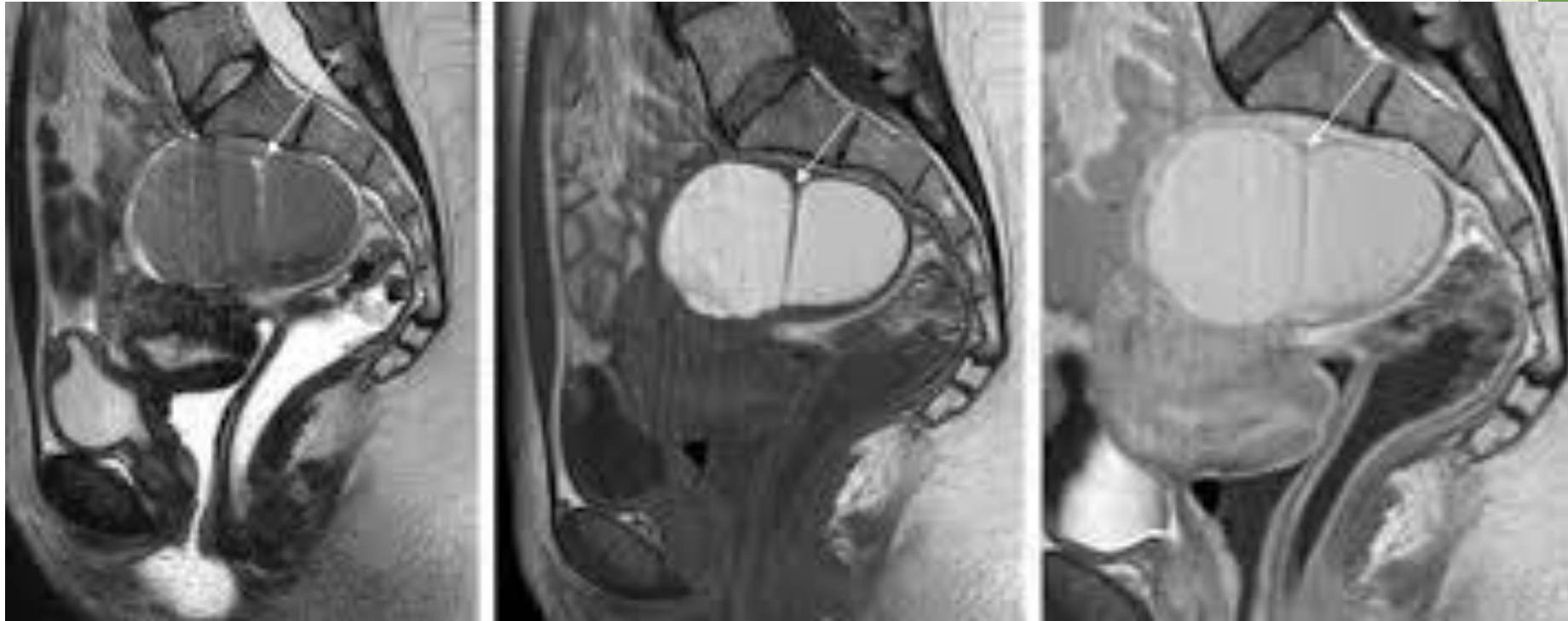


© MAYO FOUNDATION FOR MEDICAL EDUCATION AND RESEARCH. ALL RIGHTS RESERVED.



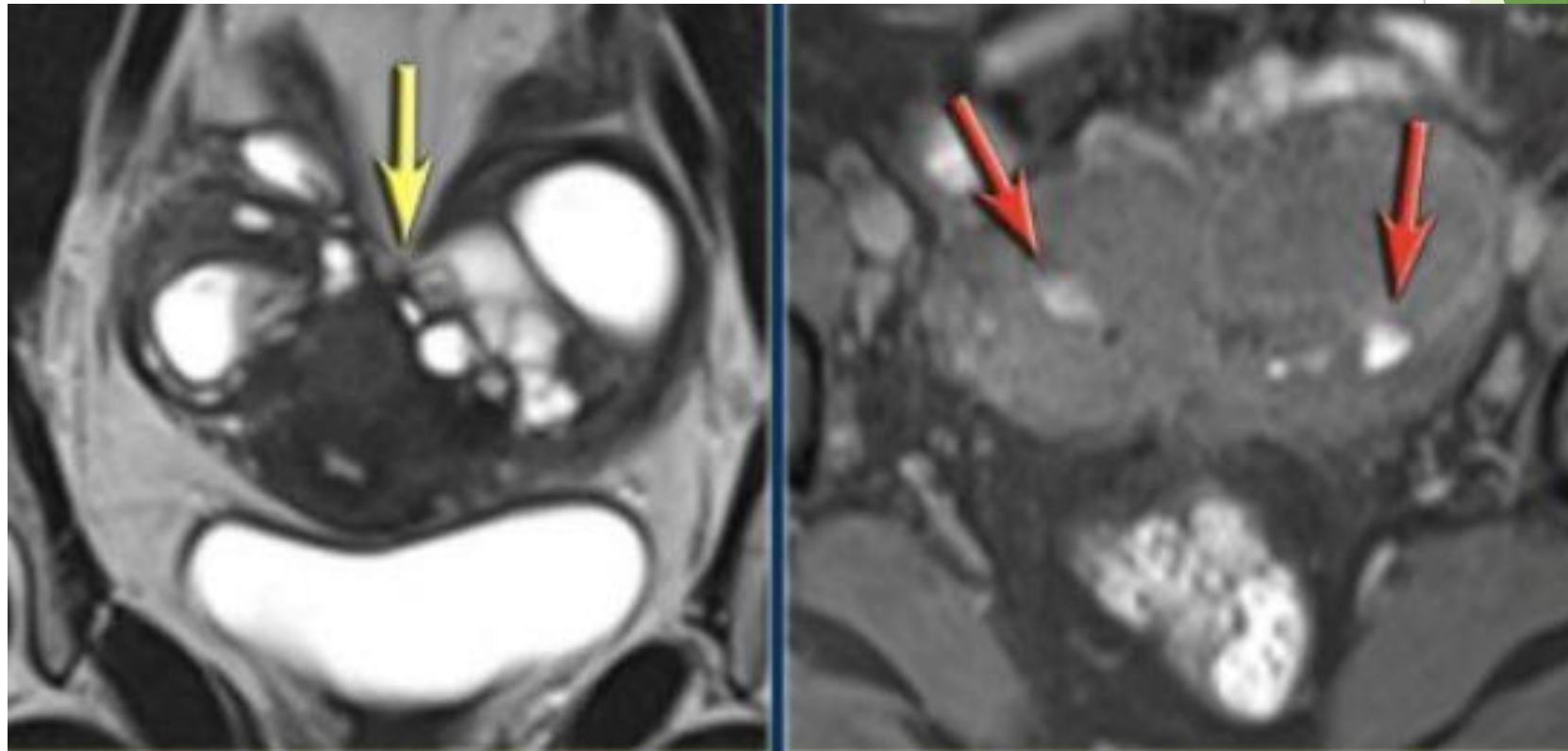
Radiology

► Pelvic MRI



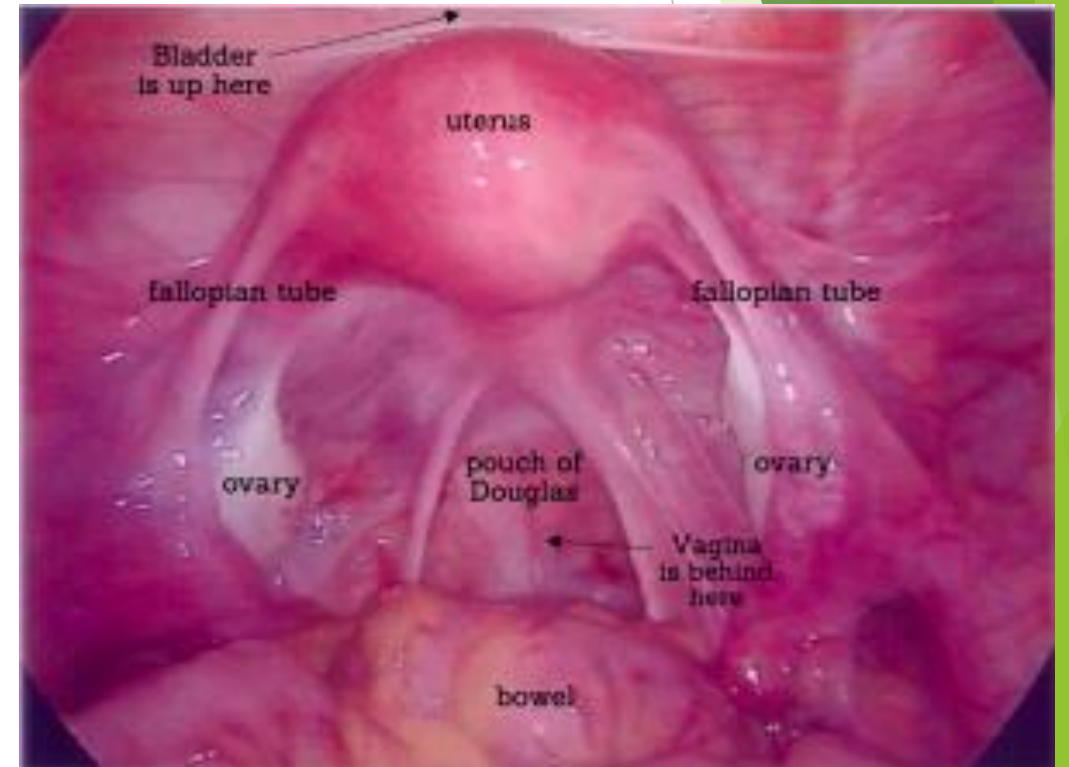
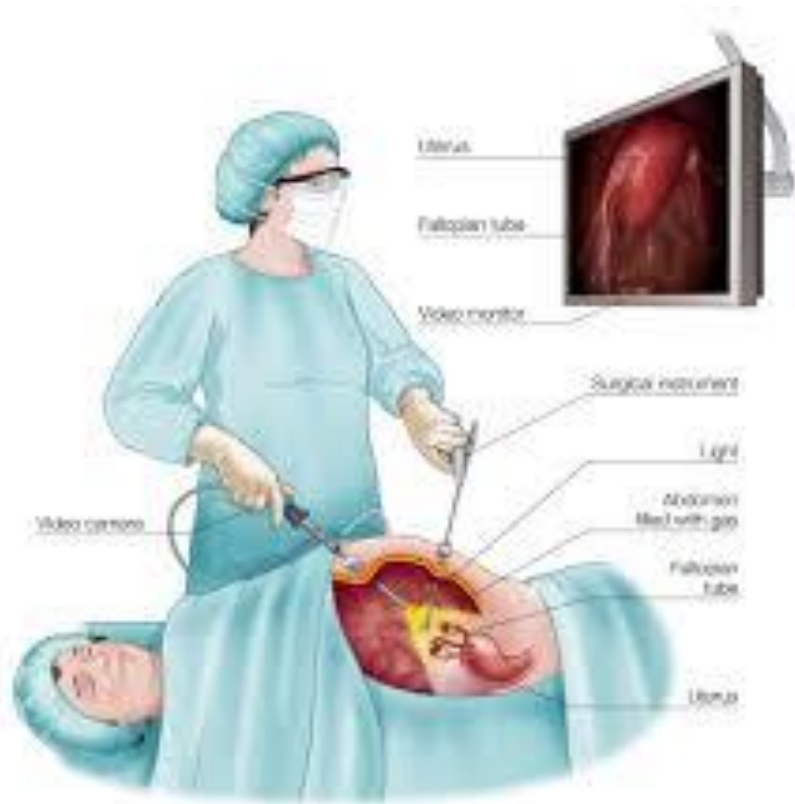
Radiology

► Pelvic MRI



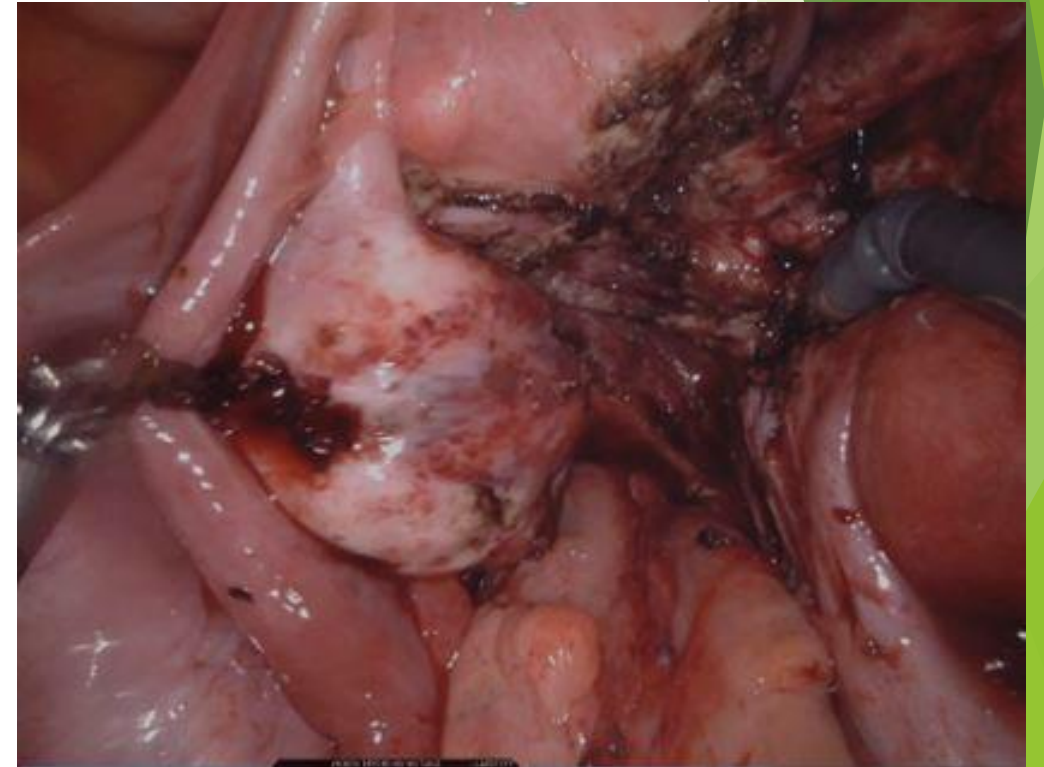
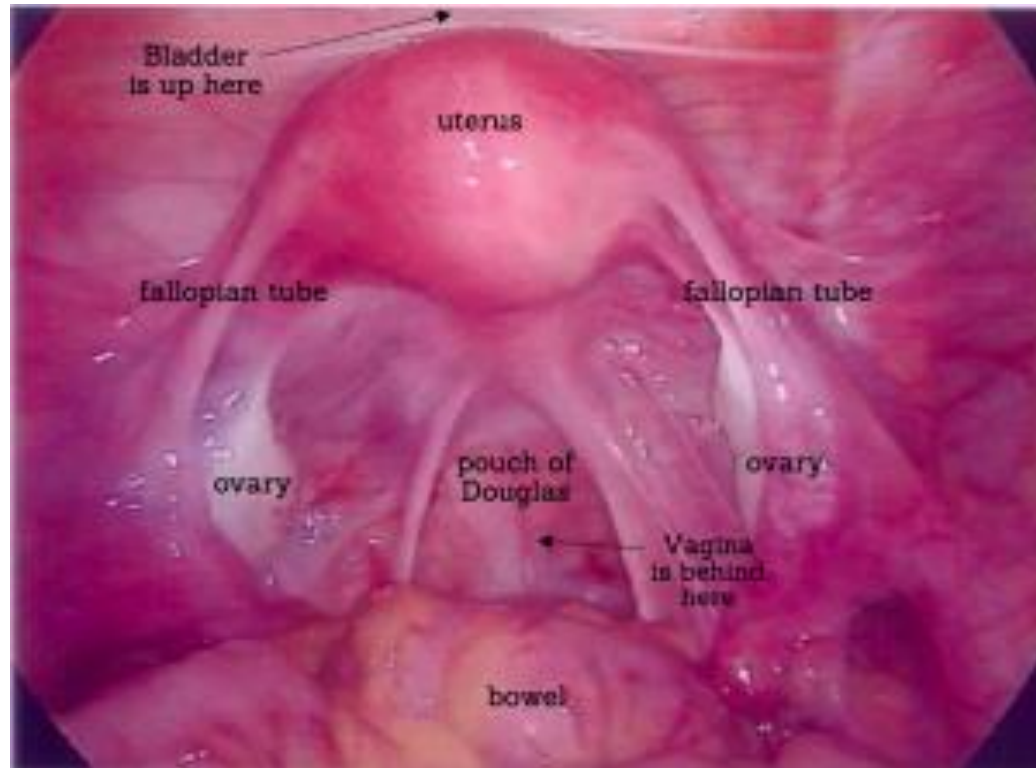
Laparoscopy

“Gold standard” and is microscopically confirmed by histopathology.

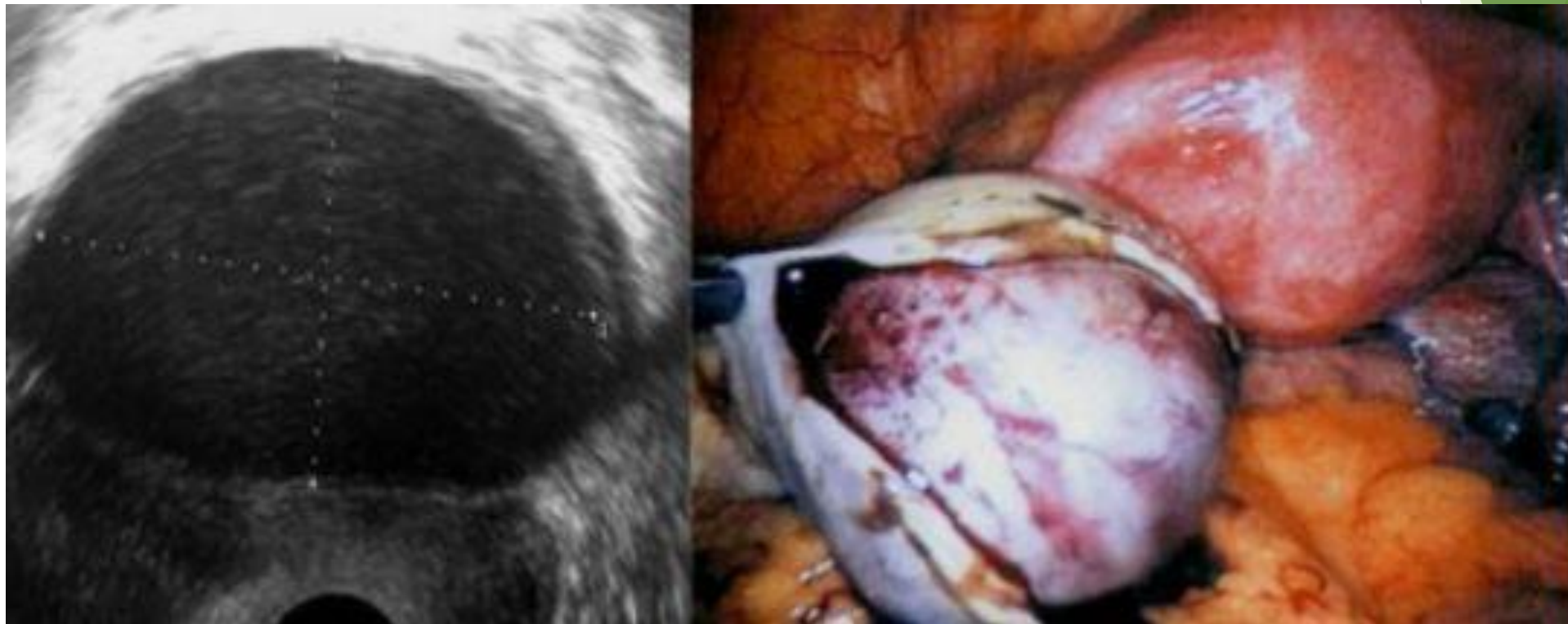


Laparoscopy

“Gold standard” and is microscopically confirmed by histopathology.



Laparoscopy



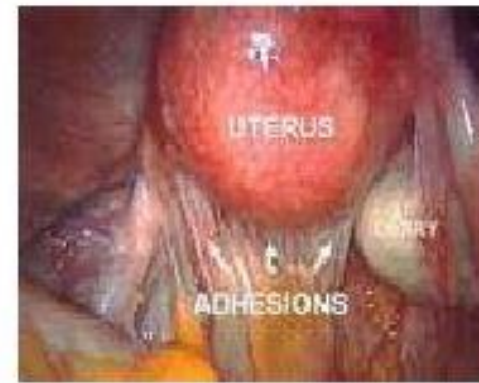
Laparoscopy



black, red, vesicular



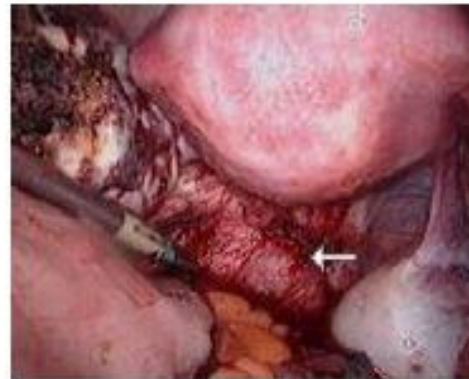
Endometriotic cysts



Adhesions



Pod obliteration



Bowel endometriosis



marked distorted anatomy

Affected Areas

Endopelvic

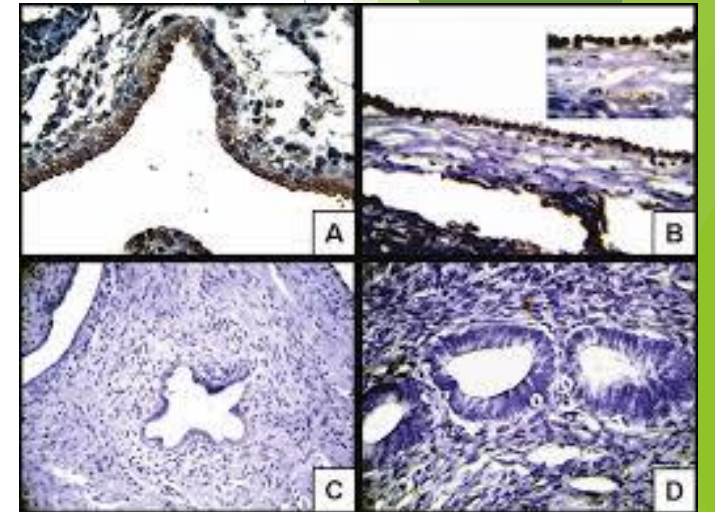
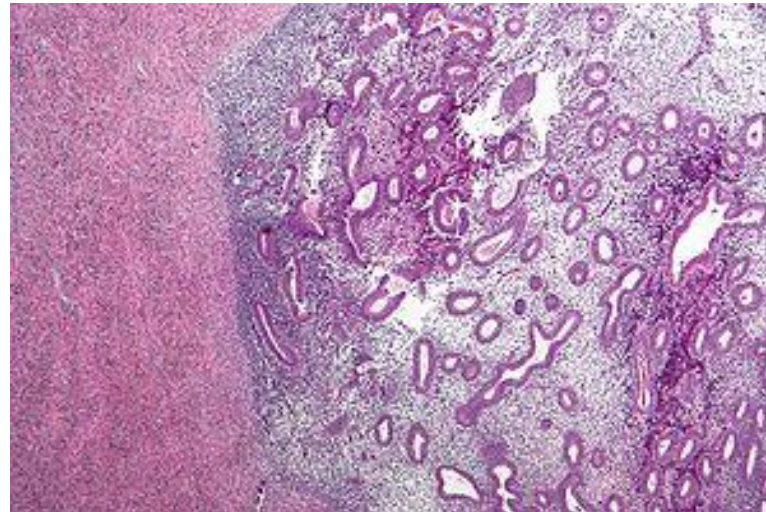
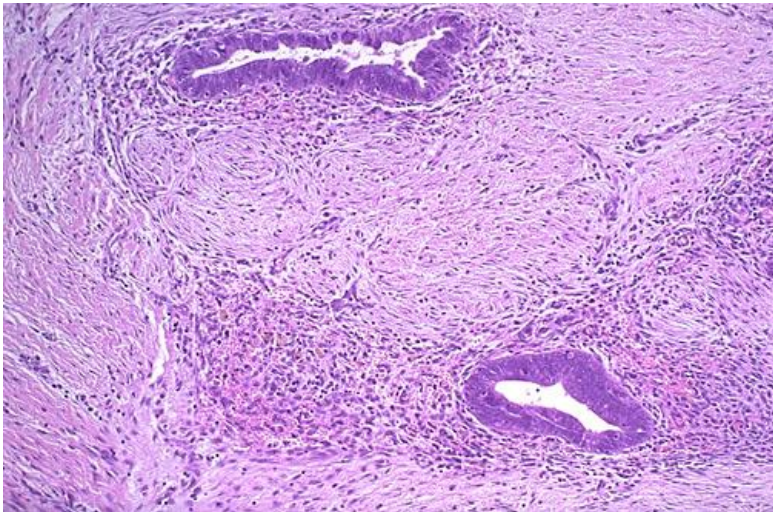
- ▶ Ovaries
- ▶ Uterine ligaments
- ▶ Rectovaginal septum
- ▶ Pelvic peritoneum
- ▶ Intestine: Bowel, Caecum, Appendix

Extrapelvic (rare)

- ▶ Scars
- ▶ Diaphragm + Lung
- ▶ Nerves

Histology

- ▶ CD10 and P63 Staining of endometrial stromal cells



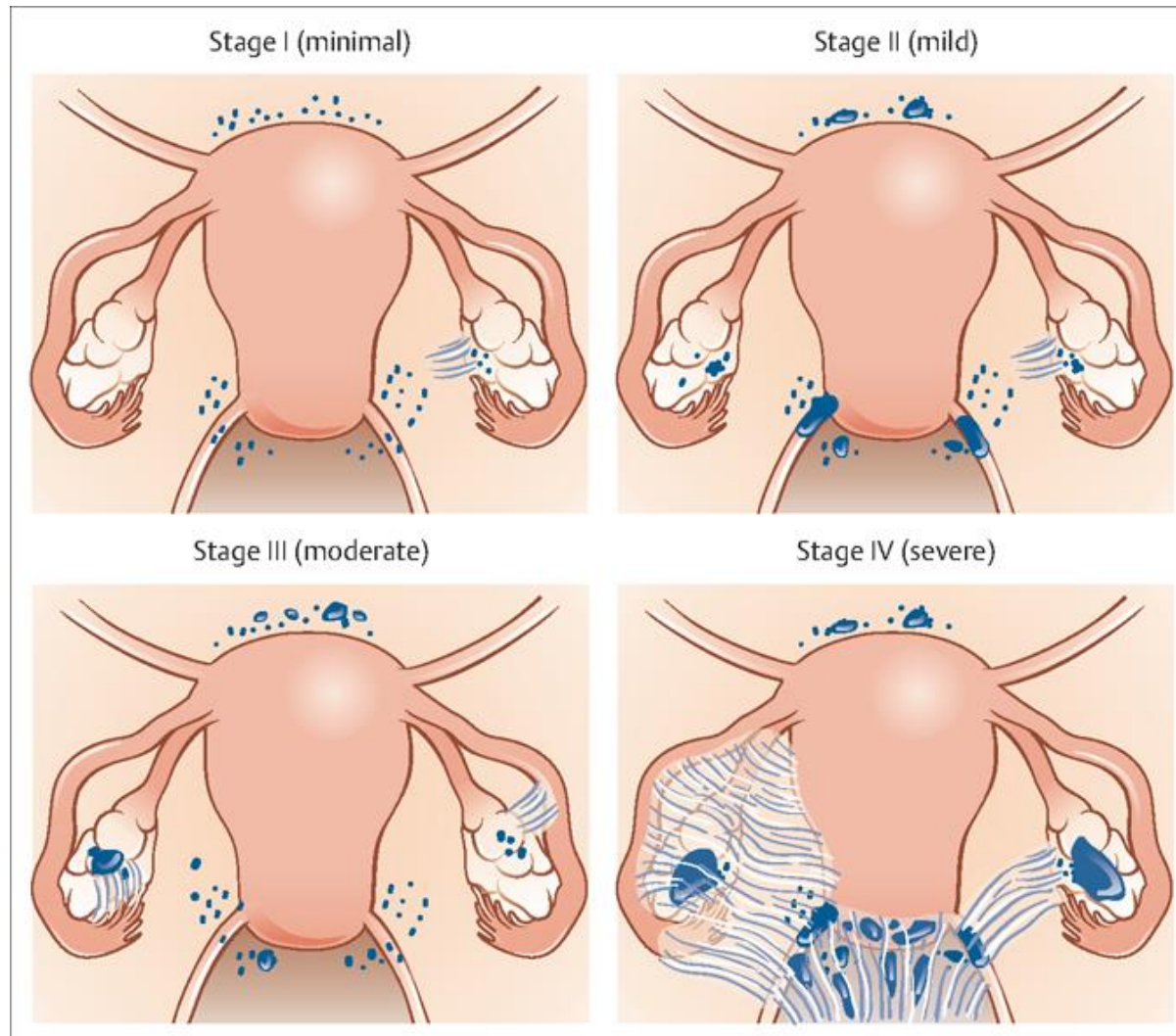
Stage

- ▶ Minimal
- ▶ Mild
- ▶ Moderate
- ▶ Severe

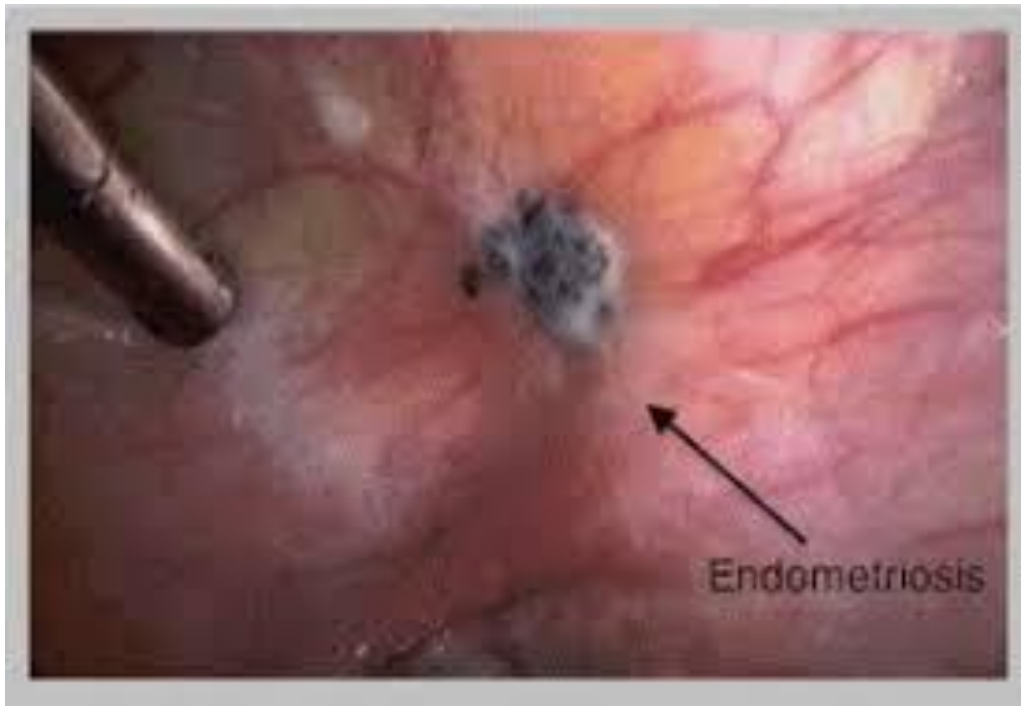
Also referred to as stage 1 to 4

Established by the ASRM (American Society of Reproductive Medicine)

Stage



Stage 1 - 2



Stage 3 - 4



Treatment

Principles

- ▶ Individualised
- ▶ Symptoms
- ▶ Fertility wishes
- ▶ Medical therapy - usually hormonal medication
- ▶ Surgery
- ▶ Life long disease
- ▶ MDT
- ▶ Support

Treatment

Medical Therapy

- ▶ Oral contraceptives COCP, POP
- ▶ Progestins Provera, Mirena
- ▶ GnRh agonist Zoladex

- ▶ Suppress estrogen synthesis
 - ▶ Inducing atrophy of ectopic endometriotic implants
 - ▶ Interrupting the cycle of stimulation and bleeding
- ▶ Often continue after surgery to help slow recurrence



Treatment

- ▶ None of these drugs can eradicate the disease

Treatment

- ▶ None of these drugs can eradicate the disease
- ▶ Hormonal treatments are often associated with unwanted effects

Treatment

- ▶ None of these drugs can eradicate the disease
- ▶ Hormonal treatments are often associated with unwanted effects
- ▶ Avoid if wishing to conceive

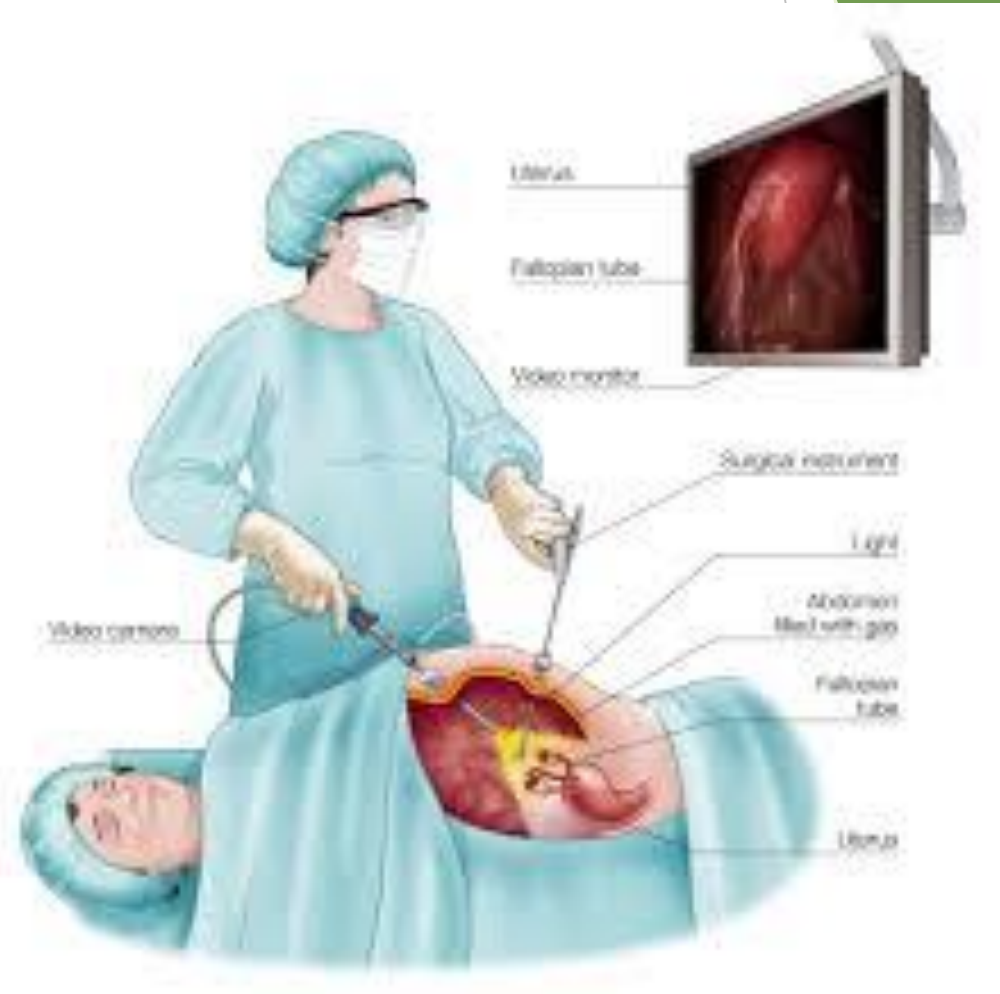
Treatment

- ▶ None of these drugs can eradicate the disease
- ▶ Hormonal treatments are often associated with unwanted effects
- ▶ Avoid if wishing to conceive
- ▶ Often recurrence of disease and symptoms when stopped

Treatment

Surgery

- ▶ Laparoscopic resection
- ▶ 70% Good response
- ▶ 40% Recurrence at 5 years
- ▶ Fertility



Treatment

MDT

- ▶ Medication
- ▶ Surgery
- ▶ Physiotherapy
- ▶ Psychology therapy

Exercise

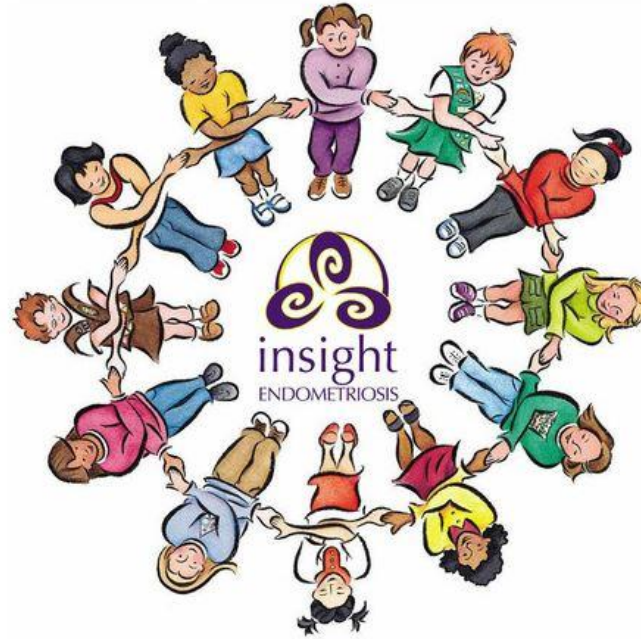
Diet

Acupuncture

Meditation

Treatment

- ▶ Support Groups
- ▶ Information
- ▶ Resources
- ▶ Pelvic pain booklet
- ▶ Useful links and websites
- ▶ <http://www.insightendometriosis.org.nz/>
- ▶ <https://nzendo.org.nz/>




endometriosis™
new zealand

PELVIC PAIN 2017



PELVIC PAIN 2017

DR SUSAN EVANS, MS DEBORAH BUSH

Case 1

▶ 28 y/o

- ▶ pain with urination (**D**ysuria)
- ▶ painful periods (**D**ysmenorrhoea)
- ▶ infertility

pain with intercourse (**D**yspareunia)
heavy menstrual bleeding

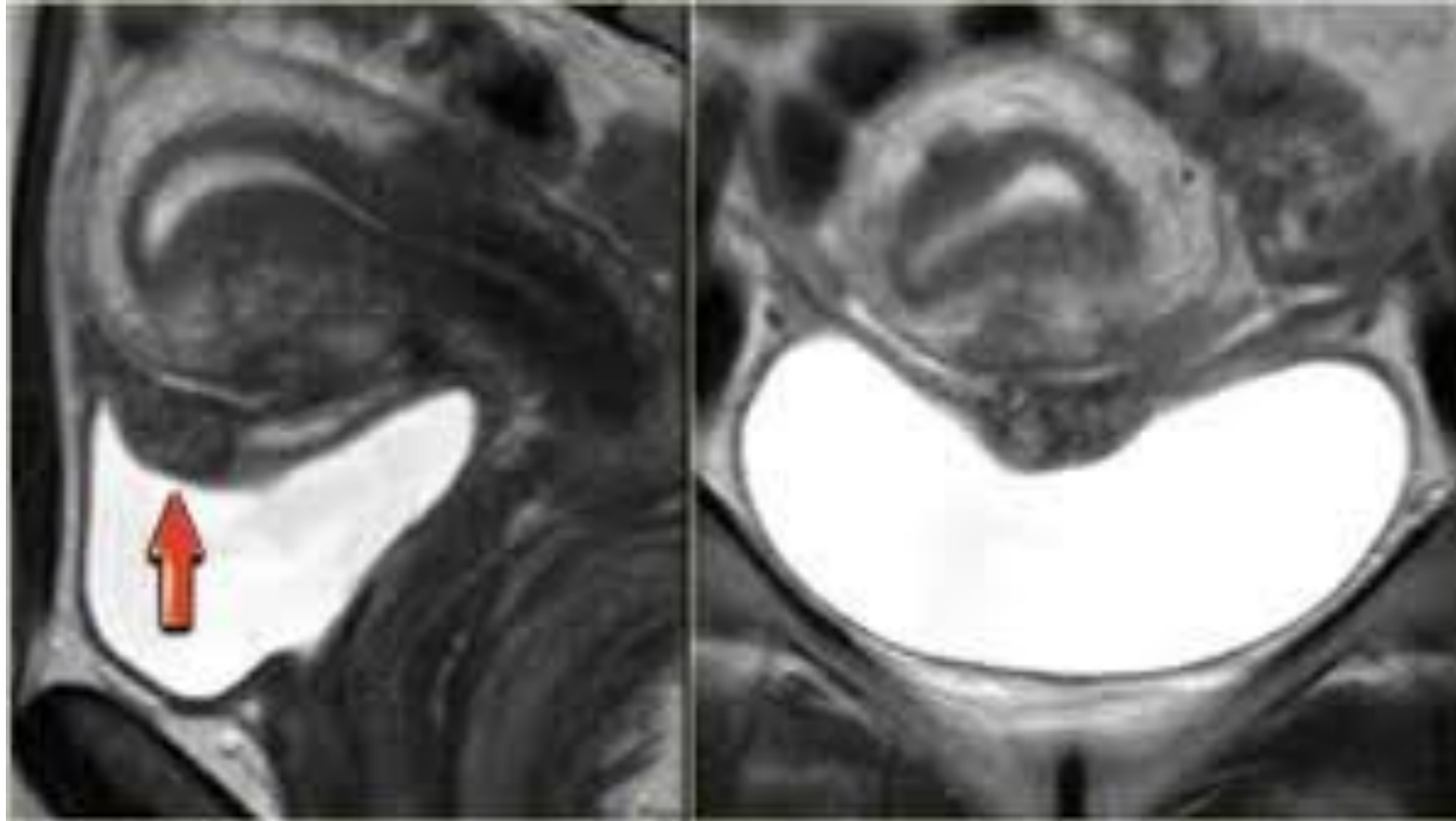
▶ Examination

- ▶ tender abdomen

nodularity around the uterosacral ligaments

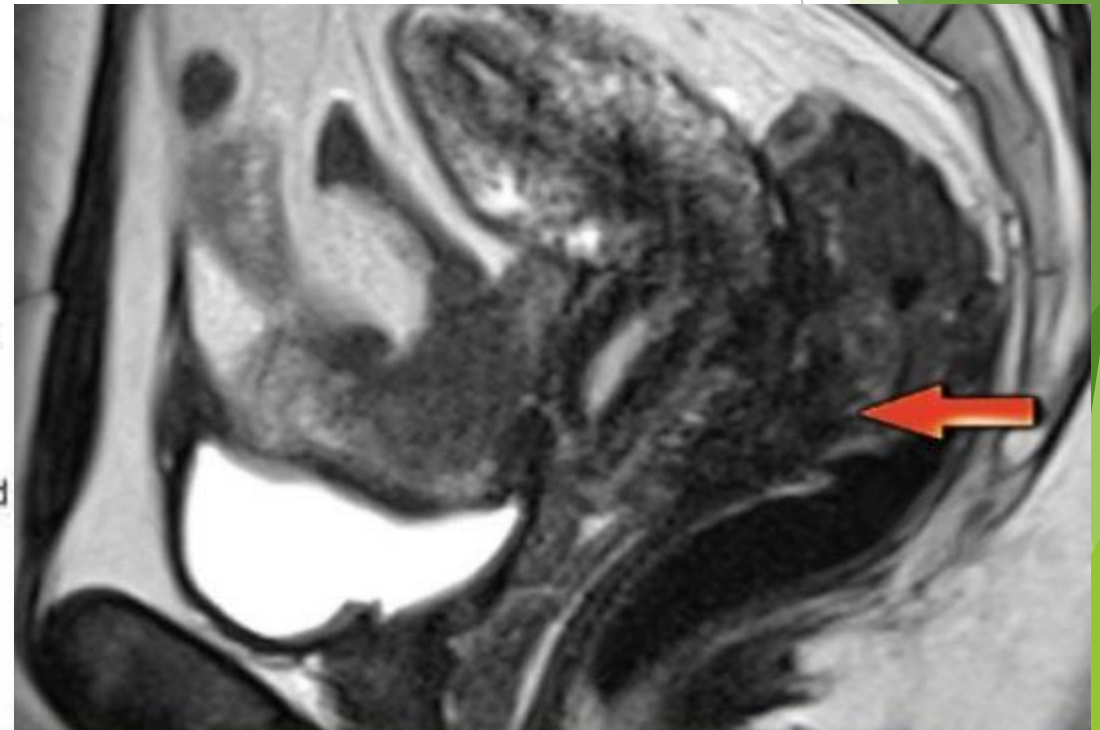
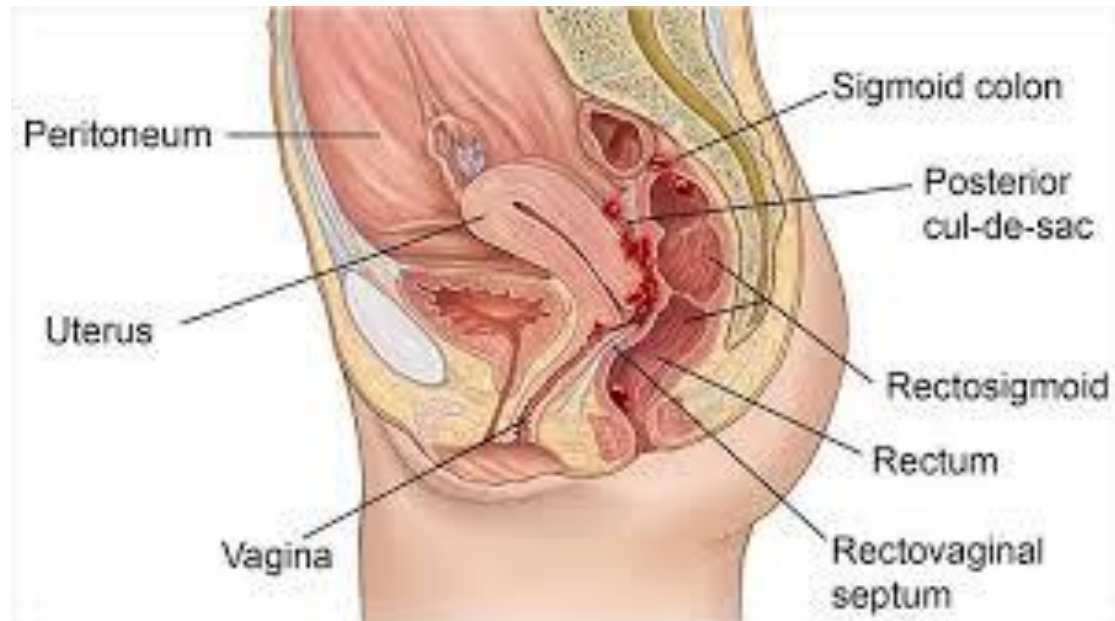
Case 1

► MRI



Case 1

► MRI



Case 1

- ▶ Treatment - surgical resection



Case 1

- ▶ Cystogram Day 10
- ▶ TROC Day 16



Case 2

- ▶ Exam

- ▶ Tender abdomen
- ▶ Unremarkable

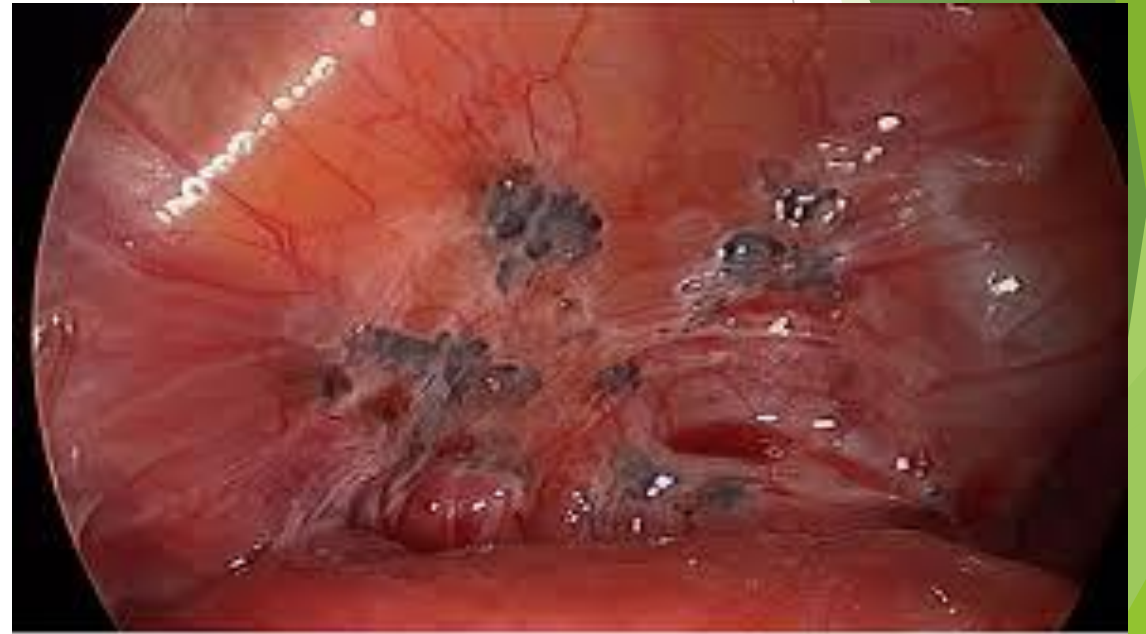
Case 2

- ▶ Exam

- ▶ Tender abdomen
- ▶ Unremarkable

- ▶ Laparoscopy

- ▶ Stage 2 to 3 endometriosis
- ▶ Mirena



Case 2

- ▶ Follow up 3 months
 - ▶ Pain significantly better
 - ▶ Central sensitisation
 - ▶ Pregabalin
- ▶ Follow up 6 months
 - ▶ Much improved
 - ▶ Back at university

Case 3

- ▶ 33 y/o
- ▶ Referred by fertility clinic
 - ▶ GPO
 - ▶ Weight loss, abdominal bloating, shortness of breath

Case 3

- ▶ 33 y/o
 - ▶ Referred by fertility clinic
 - ▶ GPO
 - ▶ Weight loss, abdominal bloating, shortness of breath
 - ▶ Imaging
 - ▶ Pelvic masses, ascites, pleural effusion
 - ▶ Ca 125 = 3000
- Disseminated malignancy

Case 3

- ▶ Admitted under Gyn Onc
 - ▶ Ascitic tap
 - ▶ Cytology - No cancer, endometrial cells and blood
- ▶ Anaemia worsened, ascites reaccumulated

- ▶ TVUS biopsy of pelvic mass was arranged
 - ▶ Histo - No cancer, endometriosis
- ▶ Severely malnourished

????Diagnosis

Case 3

- ▶ Rare form of endometriosis
- ▶ Zoladex
- ▶ Progestin
- ▶ Followed up by fertility and gastroenterology

Benign endometriosis masquerading as intra-abdominal malignancy: One of the most extreme cases reported and a review of the literature

Journal of Endometriosis and
Pelvic Pain Disorders
2018, Vol. 10(3) 174–177
© The Author(s) 2018
Article reuse guidelines:
sagepub.com/journals-permissions
DOI: 10.1177/2284026518780820
journals.sagepub.com/home/pev
SAGE

Philippa J Walker^{1,2} and Neil P Johnson^{3,4,5,6}

Abstract

Introduction: To elicit key clinical lessons from an extreme case of endometriosis associated with massive ascites and a review of the literature.

Methods: We report one of the most extreme cases of massive ascites caused by endometriosis. For literature review, MEDLINE via OVID (from 1946 to 2016) database was searched. As a result, all the publications based on the keywords relating to the review topic were acquired.

Case: A 32-year-old nulliparous woman, with stage 4 endometriosis and primary infertility, presented with massive ascites, complex pelvic mass, pleural effusion, weight loss, anaemia and elevated CA-125 suggesting ovarian malignancy. Six litres of ascites was drained. After extensive investigations to exclude malignancy, endometriosis-related ascites was diagnosed. Red-cell transfusion, nasogastric-tube-feeding and gonadotrophin-releasing-hormone analogue were initiated and long-term follow-up is planned. Ablation of ovarian function either by surgical oophorectomy or ovarian irradiation appears to cure the condition without recurrence. Endocrine therapy, in the form of gonadotrophin-releasing-hormone analogue or progestins, is useful if surgery is undesirable, as most women with this condition are young and wish to preserve fertility. Endocrine therapy alone resolves the problem in the majority, but ascites reappears after stopping treatment.

Conclusion: Endometriosis associated with massive ascites and pleural effusion is rare. There are less than 30 similar case reports in the literature. In women of reproductive age who present with clinical and imaging features to suggest ovarian malignancy, a diagnosis of endometriosis should be considered. Although permanent cure is by oophorectomy, endocrine therapy is useful if surgery is undesirable.

The Challenges

- ▶ Symptoms
- ▶ Delay in diagnosis
- ▶ Morbidity
- ▶ Huge impact QOL
- ▶ Life long, chronic disease
- ▶ Research
- ▶ Medical and surgical treatment
- ▶ Emphasise MDT approach
- ▶ See your GP, refer to gynae if any concerns!

Endometriosis

► Questions?

References

- ▶ Emerging treatment of endometriosis. Aboubakr Elnashar. Middle East Fertility Society Journal (2015) 20, 61-69
- ▶ Visible and occult microscopic lesions of endometriosis. Khaleque Newaz Khan et al. Gynecology and Minimally Invasive Therapy 3 (2014) 109e114.
- ▶ <https://nzeno.org.nz/>
- ▶ Johnson NP, Hummelshoj L, for the World Endometriosis Society Montpellier Consortium. Consensus on the current management of endometriosis. Hum Reprod 2013;28:1552-1568
- ▶ Evans S, Bush D 'Endometriosis and Pelvic Pain'; Third Edition 2016 ISBN 978-0-9946477-0-2
- ▶ Eskenazi B, Warner ML 1997 Epidemiology of endometriosis. Obstet Gynecol. Clin North Am 24:235-258
- ▶ <http://www.radiologyassistant.nl/en/p4da490c32edcc/mri-detection-of-endometriosis.html>
- ▶ *Clin Obstet Gynecol.* 2010 June ; 53(2): 413-419. doi:10.1097/GRF.0b013e3181db7ce8.

Thank you!

The background features abstract, overlapping geometric shapes in various shades of green, ranging from light lime to dark forest green. These shapes are primarily located on the right side of the slide, creating a modern, layered effect. The rest of the slide is a plain white background.