Endometriosis

Dr Pip Walker
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
- Dysmenorrhoea - Severe period pain
- Dysuria - Pain passing urine
- Dyschezia - Pain when passing a bowel motion
- Deep Dyspareunia - Pain with intercourse
- Difficulty 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

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- 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
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)
Examination

Speculum

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

Bimanual

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

Pelvic USS

- TA and TV
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
Pod obliteration

Endometriotic cysts
Bowel endometriosis
marked distorted anatomy

Adhesions
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 1 - 2

Endometriosis
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
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- Hormonal treatments are often associated with unwanted effects
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- Avoid if wishing to conceive
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- 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
Case 1

- 28 y/o
  - pain with urination (Dysuria)
  - pain with intercourse (Dyspareunia)
  - painful periods (Dysmenorrhoea)
  - heavy menstrual bleeding
  - infertility

- 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

- 19 y/o
- Recurrent presentations to GP and ED with pelvic pain
  - Chronic pain
  - Fatigue
  - Affected attendance at University
- Sister recent diagnosis of endometriosis
Case 2

- 19 y/o
- Recurrent presentations to GP and ED with pelvic pain
  - Chronic pain
  - Fatigue
  - Affected attendance at University
- Sister recent diagnosis of endometriosis
- Tried
  - COCP
  - POP
  - Amitriptyline
  - Analgesics
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
  - G0P0
  - Weight loss, abdominal bloating, shortness of breath
Case 3

- 33 y/o
- Referred by fertility clinic
  - G0P0
  - 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
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?


https://nzendo.org.nz/


Thank you!