

Misunderstood and Misdiagnosed: Endometriosis, PCOS, & Dysmenorrhea

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At the completion of this presentation the learner will:

- ▶ Have a basic understanding of the pathophysiology of endometriosis, PCOS, and pelvic pain.
- ▶ Be able to explain the basic workup involved in diagnosing endometriosis, PCOS, and chronic pelvic pain.
- ▶ Discuss the pharmacologic and non-pharmacologic therapies currently in use in endometriosis, PCOS, and pelvic pain.

Dysmenorrhea:

- Pain associated with menstruation experienced by more than half of all menstruating women for 1-2 days mostly during menstruation
- Though some experience severe pain that interrupts daily life activities for several days
- Symptoms can include: severe pain, diarrhea, vomiting, nausea, dizziness, and headaches



Primary vs Secondary Dysmenorrhea:

- ▶ Primary is cramping pain that comes before or during menstruation caused by prostaglandins; prostaglandins are high the first day of menstruation and goes down as the lining of the uterus is shed, therefore why some people feel relief as the period progresses. It typically begins soon after the start of the menstrual cycle and lessens with age. It can also improve after giving birth.
- ▶ Secondary is caused by a disorder of the reproductive organs usually caused by Endometriosis, Uterine Fibroids, Adenomyosis, and other problems with the uterus, fallopian tubes, and other reproductive organs. The pain tends to get worse overtime and last longer than typical cramps. Conditions with flare-ups like Chron's and urinary disorders can flare up during menstruation and cause worse pain.



Diagnosing Dysmenorrhea:

- ▶ Ultrasound exam when pain is not relieved with medication
- ▶ Pelvic exam
- ▶ Hysteroscopy
- ▶ Laparoscopic exploratory surgery

Treatment and Management:

- Pain medication that targets prostaglandins (NSAIDS)
- Birth control containing estrogen and progesterone or just progesterone to reduce painful periods
- IUD to lighten or stop menstruation all together
- Alternative Therapies such as acupuncture, nerve stimulation therapies, and acupressure use trigger points to reduce pain. B1 or magnesium are also thought to help though there is not enough research
- Physical therapies including relaxation exercises, yoga, and biofeedback to learn to cope with pain

Endometriosis:

- ▶ An often painful condition where non-cancerous tissue similar to that of the uterus grows outside the uterus often affecting the fallopian tubes, ovaries, and pelvic lining tissue; though rare, growths can be found outside the pelvic area
- ▶ Endometriosis tissue acts as the uterine lining would, it thickens, breaks down, and bleeds with each cycle, however when it's broken down it has no-where to be expelled from the body
- ▶ The surrounding tissue can become irritated and scar tissue and adhesions can form resulting in pelvic tissue and organs to stick together
- ▶ Not only causes pain during menstrual cycles but also affects fertility
- ▶ When it affects the ovaries, cysts called Endometriomas can form
- ▶ Often mistaken by patients for other conditions such as PID, ovarian cysts, and IBS



Symptoms:

- ▶ Dysmenorrhea in the low back or abdomen, pain during or after sex, painful bowel movements before or during the menstrual cycle, excessive menstrual bleeding during or between periods, diarrhea, constipation, bloating, nausea, fatigue before or during menstruation, and infertility
- ▶ Severity of pain is often not related to the severity of the growths; small amounts of growths can equal severe pain whereas large amounts of growths can cause little to no pain
- ▶ Some patients do not experience symptoms at all and are not diagnosed till they have trouble conceiving or have surgery of another kind
- ▶ Pain often worsens with time

Diagnosing Endometriosis:

- ▶ Can take 8-10 years for women to receive a diagnosis and affects 11% of American women aged 15-44
- ▶ Starts with a physical exam, a pelvic exam to check for cysts, nodules, painful spots, and scars behind the uterus
- ▶ An ultrasound will not show enough evidence to diagnosis, but will show the presence of Endometriomas
- ▶ An MRI can give a detailed location and size of endometriosis growths and give a map for surgical options
- ▶ Laparoscopy to check for evidence of endometriosis tissue and provide exact locations, severity, and size of growths; it is also a good opportunity to biopsy the tissue

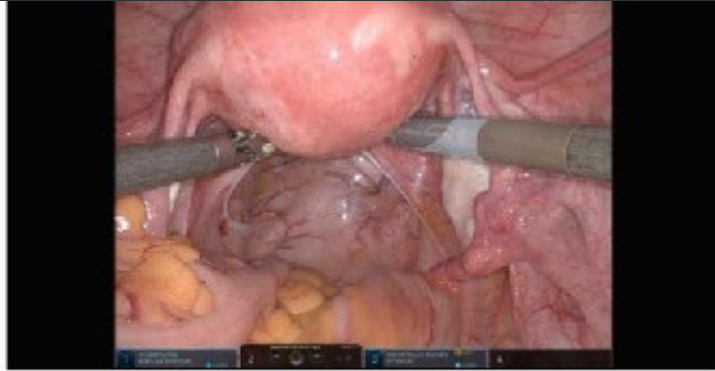


Image 1



Image 2



Image 3



Image 4



What causes Endometriosis?

- ▶ There is no known cause
- ▶ The Retrograde Menstruation Theory (also known as the Sampson Theory) by John A Sampson first suggested in 1925, suggests that during menstruation amounts of menstruation tissue backs-up into the fallopian tubes, implants into the abdomen, and grows.
- ▶ In 1927, Sampson also suggested the Benign Metastasis which suggests a small amount of endometriosis tissue can be disseminated through the uterine draining lymph vessels during menstruation; there have been reports of lymph node endometriosis
- ▶ It has also been cited that endometriosis tissue has been found in abdominal scars from surgical transplants

Treating and Managing Endometriosis:

- ▶ Over the counter pain medications that are anti-inflammatories; certain cases may require prescription medication
- ▶ Hormone therapy can ease or get rid of pain and slow the growth and prevent new growth of endometriosis tissue
 - ▶ Hormonal contraceptives can shorten and lighten menstrual cycles; continuous birth control may be an option
 - ▶ Gn-RH agonists and antagonists to block the menstrual cycle, lower estrogen levels, and can cause endometriosis tissue to shrink, however they can cause artificial menopause; Orilissa (elagolix) is the first FDA approved endometriosis treatment option to relieve pain
 - ▶ Progestin therapy to stop the menstrual cycle and growth of endometriosis tissue such as Mirena, Skyla, Nexplanon, Depo-provera, or a progestin-only birth control
 - ▶ Aromatase inhibitors can lower the bodies estrogen levels

Treatment and Managing cont.

- ▶ Conservative surgery is an option that removes endometriosis tissue while protecting the uterus and ovaries, however the pain and tissue may come back even after surgery
- ▶ Alternative treatments can include acupressure, chiropractic care, herbs (cinnamon or licorice root), supplements (B1, magnesium, and/or omega-3 fatty acids), nutritional approaches, Traditional Chinese Medicine, and immune therapy
- ▶ Hysterectomy with the removal of ovaries divides experts on being the most effective treatment vs the last resort of treatment
 - ▶ An oophorectomy causing early menopause is also an option that can reduce pain, but can remain in other organ tissue



Poly-Cystic Ovarian Syndrome (PCOS):

- ▶ A hormonal disorder, affecting women of a reproductive age, that causes imbalanced androgens, insulin, and progesterone levels that result in cysts developing along the outer edge of the ovary that contain follicles that fail to regularly release eggs
- ▶ Cause is unknown however there are factors that play a role including heredity, excess androgen (causing hirsutism), low-grade inflammation, and insulin resistance
- ▶ Symptoms typically start around first menstruation but can develop over time
- ▶ A diagnosis is made when 2 of the common symptoms are present which include polycystic ovaries, high androgen levels, and irregular periods



Diagnosing and Complications of PCOS:

- ▶ There is no single test to diagnose PCOS, but starts with a full exam, menstrual history, and pelvic exam to check for growths, masses, etc.
- ▶ Blood tests to check hormone levels and ultrasound to check the ovaries and uterine lining thickness
- ▶ Screenings for depression, anxiety obstructive sleep apnea and regular checks of BP, glucose tolerance, cholesterol and triglyceride levels may also be recommended.
- ▶ Complications of PCOS can include miscarriage/premature birth, infertility, gestational diabetes, pregnancy induced hypertension, non-alcoholic steatohepatitis, metabolic syndrome, prediabetes/type 2, depression/anxiety/eating disorders, endometrial cancer, and sleep apnea; obesity is a common occurrence with PCOS and can worsen complications



Managing and Treating PCOS:

- ▶ Treatment of PCOS is individualized based on managing what is bothering the patient; infertility, acne, obesity, or hirsutism
- ▶ Lifestyle changes such as weight-loss can improve not only the condition but may improve effectiveness of PCOS medication and fertility odds
- ▶ Medications; birth control containing both estrogen and progestin to decrease androgen production and regulate estrogen, which can lower the risk of endometrial cancer and correct irregular bleeding and hirsutism,
- ▶ Progestin therapy which involves taking progestin for 10-14 days every 1-2 months and can protect against endometrial cancer
- ▶ To treat Hirsutism birth control to decrease the androgen production, Spironolactone (Aldactone) to block the effects of androgen on the skin, acne treatments or Eflornithine (vaniqa) to slow facial hair growth
- ▶ Menopause often resolves symptoms



Options for those trying to conceive:

- ▶ Clomiphene during the first part of the menstrual cycle
- ▶ Letrozole (femara) can stimulate the ovaries
- ▶ Metformin may be added if clomiphene does not help ovulation
- ▶ Gonadotropins
- ▶ IVF



Alternative PCOS Treatments:

- ▶ Vitamin D as most with PCOS are deficient
- ▶ Probiotics that improve gut health may reduce inflammation associated with PCOS and regulate sex hormones
- ▶ N-acetylcysteine has been found to improve insulin sensitivity and ovulation
- ▶ Berberine has shown effectiveness in improving insulin sensitivity and hormonal balance
- ▶ Omega-3 fatty acids have inflammatory properties
- ▶ Inositol can manage insulin levels, support ovarian function, improve egg quality and regulate menstrual cycles
- ▶ Acupuncture can help reduce cortisol levels, promote regular ovulation, and increase blood flow to the ovaries
- ▶ Traditional Chinese Medicine using herbs such as cinnamon to regulate blood sugar and menstrual cycles, licorice root to lower androgen levels and chasteberry to regulate progesterone levels and menstrual cycles



Reference Guide:

- ▶ Acog.net
- ▶ Myclevelandclinic.org
- ▶ Mayoclinic.org
- ▶ Plannedparenthood.org
- ▶ Fda.gov
- ▶ Pmc.ncbi.nlm.nih.gov
- ▶ Endometriosisassn.org
- ▶ Naturemed.org



?Questions?

THANK YOU!!

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