

Review Article

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Endometriosis –A New Age Disease

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ABSTRACT

Endometriosis is the biological complication that occurs when the lining of the uterus called endometrium grows outside the uterine cavity. It affects females in their reproductive years, and is an estrogen-dependent condition. In US about 5 million women have endometriosis with different symptoms. Endometriosis is known to occur when the lining of the uterus called the endometrium, grows in other places such as fallopian tubes, ovaries or along the pelvis. The major issues that limit the currently available endometriosis treatment are lack of awareness, delay in diagnosis, high cost, long-term treatment and recurrence. The impact includes fertility, sexuality and ability to work, play and personal relationships.

Treatment for endometriosis involves pain medication, hormone therapy, surgery, or a combination of both. However to avoid recurrence hysterectomy or total removal of the uterus may be a 'last resort' option.

Key-words: Endometriosis, Laparoscopy, Hysterectomy, Hormonal therapy.

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INTRODUCTION

Endometriosis is a chronic, heterogeneous disease, painful and seen progressive in women. About 5 million women in America have endometriosis. It can occur in teenagers & adult women of all ages, but most typically occurs in women between the ages of 25-40. It may also relate to family history, menstrual history, not having had children. It is generally seen when mucus membrane cells lining the uterus (endometrium) forms implants that attach, grow & function other than the uterus generally in the pelvic region.

Endometrial cell contains receptors that bind to estrogen & progesterone, which promote uterine growth & thickening. These cells get implanted in organs & activities continue to occur, leading to bleeding & scarring. Endometrial implants differ in size, shape & color. They may reduce in size or disappear or may grow over the years.

Early stage implants are very small; if they continue to grow they may form flat

Lesions (Injured areas), small nodules, or cysts called endometriomas. Implants may be colorless, red or dark brown called chocolate cysts filled with dark brown blood appearing on the ovaries. Implants are seen forming in areas of pelvis ovaries, fallopian tubes, uterine surfaces, bowel, bladder, rectum; peritoneum. Remote sites of endometriosis include spinal cord, nose, lungs, lymph nodes, forearm and the thigh. These implants respond to monthly cycle by getting filled with blood, break down and bleed. Lesions grow as the cycle continues. These lesions are not cancerous, but may cause obstruction in nearby pelvic organs causing pain, inflammation & infertility^[1, 2].

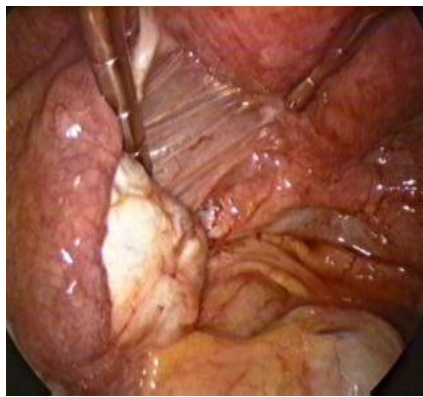


Figure1 Less advanced endometriosis

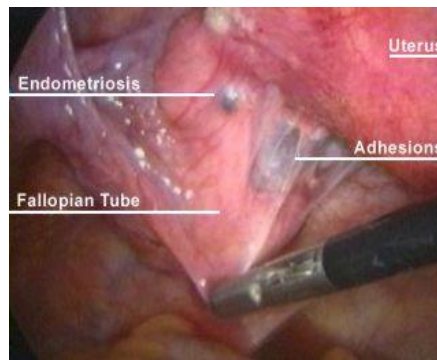


Figure2 Advanced endometriosis

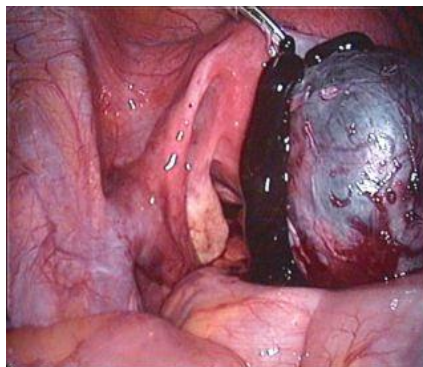


Figure 3 Chocolate cyst

CAUSES

There is no specific cause in development of endometriosis. Several theories have been put forward. Genetic, biologic, environmental factor combinely may work together which helps the initial process, implantation, production, & spreading of the implants.

- During menstruation, blood with endometrial cells flow back into the fallopian tubes, due to which cells remain there and grow a new lining, says one theory.
- Another theory is that the bloodstream carries endometrial cells throughout the body.
- Endometriosis is also known to develop due to impaired immune system, as the system fails to identify & destroy endometrial tissue that grows outside the uterus.
- There is a yet another theory which explains that abdominal cells that were present since a women's embryonic state retain their ability to become endometrial cells. It may also be genetic [3].

It is said that these stray cells behave the same way as the cells in the lining of the uterus and respond to the monthly cycle hormones. In response to hormones and the menstrual cycle these cells thicken and break down with the period. However, as there is nowhere for this cells to go, they become trapped. This process is repeated every month and these cells become larger and then develop into endometriosis, causing cysts, adhesions and scar tissue.

ENDOMETRIOSIS: WHO IS AT RISK?

The condition is commonly seen in women's who are:

- In their 30s and 40s
- Not had children
- Periods longer than 7 days
- Having cycles shorter than 28 days
- Started their period before 12 age
- Have a mother or sister having endometriosis[4]

LOCATION OF ENDOMETRIOSIS:

Common /Possible sites of endometriosis:

- The ovaries , anterior cul-de-sac, i.e., the space between the uterus and bladder
- Outer surface of the uterus, lining of the pelvic cavity,
- Occasionally, endometrial tissue is found in other places, such as:
Intestines, rectum, bladder, vagina, cervix, vulva [5].

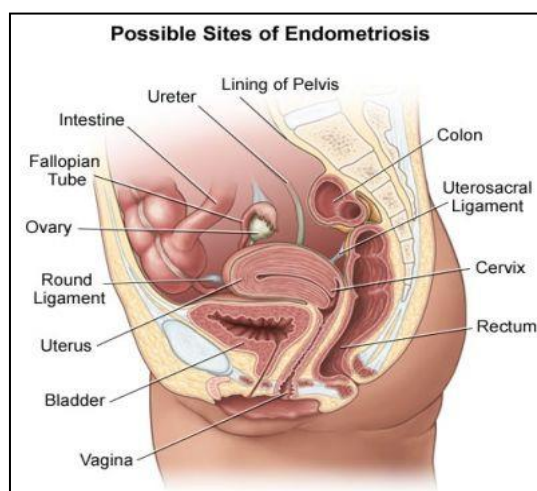


Figure 4

SYMPTOMS

Women's associated with endometriosis shows different symptoms. Severe cramping pain is the most common symptom occurring on both sides of pelvis, radiating to the lower back & rectal areas down to the legs during the menstruation.

The pain is also associated with-

- Sexual intercourse

- Fatigue
- Painful urination
- Bowel movements
- GIT upset (constipation/ diarrhea) [6].

DIAGNOSIS

Pelvic Examination- It is a physical pelvic examination where the doctor evaluates the size & position of the ovaries & check for tender masses or nodules behind the cervix.

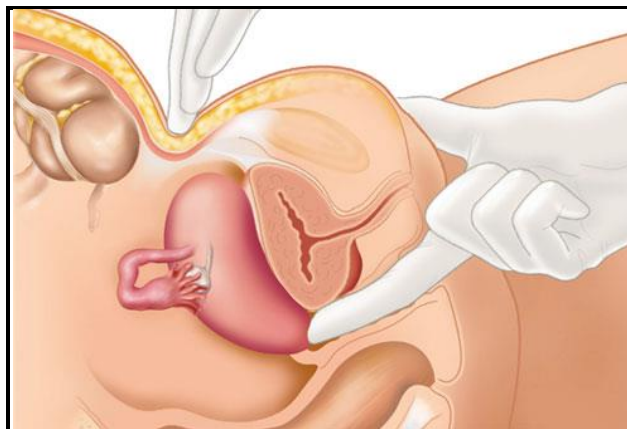


Figure 5 Pelvic Examination

Laproscopy- This diagnosis confirms the suspected endometriosis and evaluates its severity. It may also be used to treat endometriosis. It is a minor surgical procedure, whereby the doctor puts a thin scope in the abdomen to view pelvic organs.

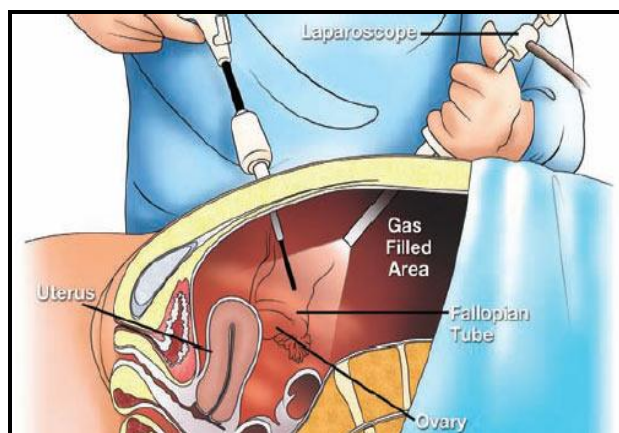


Figure 6 Laparoscopic Examination

Imaging Tests- It includes the use of ultrasound specifically in those patients who are suspected to have cysts, uterine fibroids or ectopic pregnancy. They detect endometriomas cyst larger than 1 cm usually located on the ovary [7].

TREATMENT

Managing endometriosis in a perfect way is not yet possible. But three basic treatment approaches are:-

- Pain Medication (Relieves Cramping Pain).
- Contraceptive Pills/Hormonal Therapy (Reduces endometrial implants size).
- Surgery (Reduces endometrial implants, restores fertility, or possibly cure the condition).

OR Combined Therapy –Hormonal and Surgery

1. **Pain Medication:** - To relieve the chronic cramping pain associated with endometriosis, NSAIDs such as naproxen (Aleve) & ibuprofen (Advil) or acetaminophen (Tylenol) can be given.

2. **Contraceptive Pills/Hormonal Therapy:** - This therapy is used in women's not trying to get pregnant as this therapy mimic/blocks ovulation. This includes oral contraceptives, progestin, GnRH agonist and danazol.
3. **Surgery:** - We can opt for this treatment if there is severe pain not responding to medications & Hormonal therapy- or if the women to become pregnant & endometriosis is contributor to infertility.

Two types of Surgery:

1. Laproscopy
 2. Hysterectomy
1. **Laproscopy:** - Most commonly performed surgical treatment for endometriosis. This method includes inserting laproscope (telescopic tube) inside through small abdominal incision by giving a general anesthesia. Implants are removed & scar tissues are destroyed with the help of heat. Laproscopy is performed by giving general anesthesia and the patient can go home the same day. Recovery takes few weeks.
 2. **Hysterectomy:** - This surgery is performed in severe endometriosis which involves removal of the uterus. This surgery is performed frequently in premenopausal women. Immediate menopause is seen after the hysterectomy, if the ovaries are removed and child bearing capacity comes to an end.

Types of Hysterectomies-

- 1) Total Hysterectomy (Removal of uterus and Cervix) - To avoid recurrence of endometriosis this type of surgery can be performed. It is divided into partial, total and radical hysterectomy.

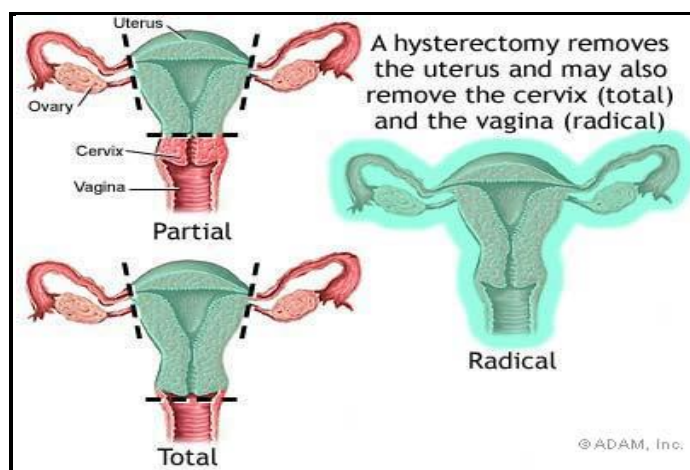


Figure 7

- 2) Bilateral Oophorectomy (Removal of both ovaries) - In endometriosis removal of ovaries is often performed in combination with hysterectomy. This procedure is not curative if endometriosis is outside the ovary. [7-10]

4. Herbal Treatment for Endometriosis:-

Bioidentical Progesterone Cream (Progenssa 20)

Bioidentical Progesterone stops proliferation of endometrial cells by blocking monthly estrogen that stimulates the aberrant endometrial cells

Herbal Formula (ProSoothe)

Natural herbal formula -ProSoothe significantly improves pelvic pain/cramps and uterine fibroids, irritability, tension, acne, headaches, mood swings, breast pain, bloating and weight gain.

Dandelion and vitex, (chaste tree) is found in this herbal formula that helps the body remove exogenous, (external excess estrogen) from contaminated food or hormone therapy, (xenosteroids).

Evening Primrose Oil

Linolenic acid, an omega-6 fatty acid found in Evening primrose oil (EPO) decreases inflammation which helps endometrial cells responding monthly to the hormonal changes and become inflamed and shed like normal menstrual tissue [7-10].

COMPLICATIONS AFTER HYSTERECTOMY

After hysterectomy, women may have

- Hot flashes,
- Vaginal dryness and irritation,
- Insomnia and weight gain.

If Estrogen replacement therapy is suggested after hysterectomy, it is associated with the risk of stroke and possible increased risk of breast cancer. If total hysterectomy is performed in women she has to get regular pelvic and breast examination done [11].

DIET/EXERCISE IN ENDOMETRIOSIS

- A high fiber diet containing fruits, vegetables, beans, whole grains, and nuts.
- Having plant-based foods, low-fat dairy products, and having lean meats.
- Fish containing Omega-3 fats (*salmon, mackerel, sardine and herring,*) walnuts, flaxseeds, canola oil, fish oil and pumpkin seeds.
- Organic produce meat and milk.
- Endorphins are released on exercise which helps in relieving pain
- Exercise improves circulation.
- Endometriosis treatment is to lower estrogen levels, thus regular exercise lowers the amount of estrogen in the body and may help improve endometriosis symptoms [12].

CONCLUSION

Awareness plays a major role in case of Endometriosis. Owing to ignorance and lack of knowledge, patients often do not opt for such diagnosis and advancement in the condition is seen.

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