

Adenomyosis

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ABSTRACT

Adenomyosis is a condition in which the inner lining of the uterus (the endometrium) breaks through the muscle wall of the uterus (the myometrium). Adenomyosis can cause menstrual cramps, lower abdominal pressure, and bloating before menstrual periods and can result in heavy periods. Adenomyosis is a benign condition. It is not generally life-threatening. Nonetheless, prolonged and heavy bleeding can cause anemia, which can present with symptoms (such as fatigue, mood changes and dizziness). Adenomyosis isn't necessarily harmful. However, the symptoms can negatively affect your lifestyle. Some people have excessive bleeding and pelvic pain that may prevent them from enjoying normal activities such as sexual intercourse. Women with adenomyosis are at an increased risk of anemia. Anti-inflammatory drugs are might recommend anti-inflammatory medications, such as ibuprofen (Advil, Motrin IB, others), to control the pain, Hormone medications, Hysterectomy.

Keywords: Adenomyosis, Endometrium, Myometrium, Pelvic Pain.

INTRODUCTION

Adenomyosis (add-en-o-my-OH-sis) is a condition of the female reproductive system. It causes the uterus to thicken and enlarge. Endometrial tissue lines the inside of the uterine wall (endometrium). Adenomyosis occurs when this tissue

grows into the myometrium, the outer muscular walls of the uterus. This extra tissue can cause the uterus to double or triple in size and lead to abnormal uterine bleeding and painful periods.

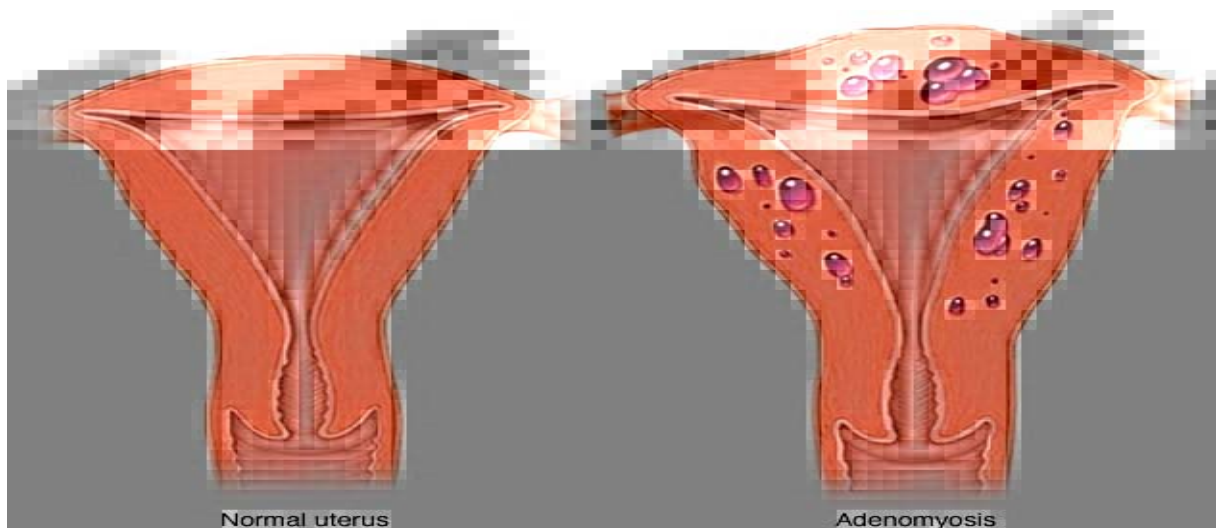


Fig. 1. Adenomyosis

SYMPTOMS

Many people with adenomyosis don't have symptoms. Some people experience:

- 1) Painful menstrual cramps (dysmenorrhea).
- 2) Heavy menstrual bleeding (menorrhagia).
- 3) Abnormal menstruation.
- 4) Pelvic pain.
- 5) Painful intercourse (dyspareunia).
- 6) Infertility.
- 7) Enlarged uterus

CAUSES

The cause of adenomyosis isn't known. There have been many theories, including:

- 1) **Invasive tissue growth.** Some experts believe that endometrial cells from the lining of the uterus invade the muscle that forms the uterine walls. Uterine incisions made during an operation such as a cesarean section (C-section) might promote the direct invasion of the endometrial cells into the wall of the uterus.
- 2) **Developmental origins.** Other experts suspect that endometrial tissue is deposited in the uterine muscle when the uterus is first formed in the fetus.
- 3) **Uterine inflammation related to childbirth.** Another theory suggests a link between adenomyosis and childbirth. Inflammation of the uterine lining during the postpartum period might cause a break in the normal boundary of cells that line the uterus.
- 4) **Stem cell origins.** A recent theory proposes that bone marrow stem cells might invade the uterine muscle, causing adenomyosis. Regardless of how adenomyosis develops, its growth depends on the body's circulating estrogen.

Risk Factors

Risk factors for adenomyosis include:

- 1) Prior uterine surgery, such as C-section, fibroid removal, or dilatation and curettage (D&C)
- 2) Childbirth
- 3) Middle age

Most cases of adenomyosis which depends on estrogen are found in women in their 40yrs and 50yrs. Adenomyosis in these women could relate to longer exposure to estrogen compared with that of younger women. However, current research suggests that the condition might also be common in younger women.

MANAGEMENT AND TREATMENT

Because the female hormone estrogen promotes endometrial tissue growth, adenomyosis symptoms often go away after menopause. In the meantime, these treatments can ease pain, heavy bleeding and other symptoms:

- 1) **Pain medications:** Non-steroidal anti-inflammatory drugs, or NSAIDs, such as ibuprofen or naproxen, ease cramping.
- 2) **Hormonal birth control:** Estrogen thickens the uterine wall and can worsen bleeding and cramping. Certain hormonal contraceptives can stop menstruation and symptoms. Options include birth control pills, injection and hormonal intrauterine devices (IUD)
- 3) **Hysterectomy:** This surgery removes the uterus. After a hysterectomy, you won't have a menstrual cycle or be able to get pregnant.

Complications

- 1) In pregnancy: miscarriage and premature labour
- 2) If women often have prolonged, heavy bleeding during periods, it can develop chronic anemia, which causes fatigue and other health problems.

INFERTILITY

Natural Tips to Manage Symptoms

Natural tips for managing adenomyosis symptoms include:

- 1) Use heating pads
- 2) Get massage therapy or acupuncture
- 3) Try herbs and supplements
- 4) Alter your diet

5) Exercise

1) **Use heating pads**

In a review of studies looking at drug-free ways to relieve menstrual pain, heat (from heating pads, hot water bottles, etc.) was found to be effective in some cases. Another study examined the use of a heat patch placed on the lower abdomen during menstruation and found that it was effective in making pain less severe.

2) **Get Massage Therapy or Acupressure**

Massage with Essential Oils: In a study comparing the use of lotion with essential oils to lotion with synthetic fragrance, women with painful periods were told to massage their lower abdomens with the cream every day from the end of one period to the beginning of the next.

The group with the essential oil-based cream had fewer days of pain during the next period. The oils used (diluted in the cream!) were lavender, clary sage and marjoram. The oils contain pain-relieving compounds that the study authors suspect caused the reduction in menstrual pain.

Massage with Aromatherapy:

Another study found that women with painful periods who massaged their abdomens with rose oil experienced more pain relief than women who used unscented almond oil or no oil at all. Women were told to massage their abdomens on the first day of two periods in a row, but the significant pain-relieving effects didn't kick in until the second cycle.

Acupressure: In a study that compared women with painful periods who received acupressure to women who did not receive it, the group who received acupressure had less severe

pain immediately after and for the next two hours.

3) **Try Herbs and Supplements**

A wide variety of herbal remedies have been used throughout history and around the world for painful, long or heavy periods. Some options with research supporting their usefulness for pain relief, mood improvement, or bleeding reduction include:

a) **Valerian:** A high-quality study found that valerian was effective at reducing pain during a period when given in 255 milligram doses three times per day for three days at the start of a period, for two periods in a row. The researchers believe the herb worked because of its antispasmodic effects.

b) **Rosa damascena (Damask rose):** A study compared the use of a painkiller to Rosa damascena extract on painful periods. The two worked equally well and were effective in reducing pain intensity.

c) **Chinese herbal medicine:** Some research suggests that combinations of Chinese herbs may help with painful periods. The most popular (based on prescriptions in Taiwan) are Corydalis yanhusuo, Cyperus rotundus

d) **Rhubarb (Rheum emodi):** Women taking capsules of rhubarb powder twice a day for two days before their period started and throughout the first three days of their period had a significant decrease in pain and its duration.

e) **Vitamin B1 and vitamin E:** In a review of human studies, vitamin B1 at 100 milligrams per day was identified as an effective pain relief option for painful periods.

f) **Frankincense and myrrh:** Myrrh water extract, extract and a combination of the two were effective at reducing inflammation

and pain, these herbs may also help women with painful periods.

- g) **Magnesium:** Magnesium was effective at reducing pain.
- h) **Omega-3 fatty acids:** In a small trial comparing fish oil to placebo pills, fish oil was more effective at relieving menstrual pain.

Other possible herbs and supplements with some support in terms of formal research include fenugreek, fennel, ginger, chasteberry, cumin, a combination of fish oil and vitamin B1, peppermint, “true” cinnamon or *Cinnamomum zeylanicum*, thiamine, pyridoxine, zataria, and zinc sulphate.

A total of 333,693 women contributed 1,185,855 woman-years (2006-2015) for incidence calculations. Associated symptom-related codes (menorrhagia or abnormal uterine bleeding, dysmenorrhea or pelvic pain, dyspareunia, and infertility) were observed in 90.8%; 18.0% had co-occurrent endometriosis and 47.6% had co-occurrent uterine fibroid codes. The overall adenomyosis incidence was 1.03% or 28.9 per 10,000 woman-years, with a high of 30.6 in 2007 and a low of 24.4 in 2014.

Overall age-adjusted estimated incidence rates declined during the 10-year study interval (linear trend $P < .05$). Incidence was highest for women aged 41-45 years (69.1 per 10,000 woman-years in 2008) and was higher for black (highest 44.6 per 10,000 woman-years in 2011) vs white women (highest 27.9 per 10,000 woman-years in 2010).

Overall prevalence in 2015 was 0.8% and was highest among women aged 41-45 years (1.5%).

Among the 624 potential adenomyosis cases identified by diagnostic codes in 2012-2015 and with sufficient information in the medical record to determine true

case status, 490 were confirmed as incident cases, yielding a 78.5% (95% confidence interval, 75.1%, 81.7%) positive predictive value of adenomyosis ICD-9/ICD-10 codes for identifying an incident adenomyosis case. Health care burden was substantial: 82.0% of women had hysterectomies, nearly 70% had imaging studies suggestive of adenomyosis, and 37.6% used chronic pain medications.

CONCLUSION

Adenomyosis impose a high burden to the woman’s life and the health care system. Among black women incidence rates are disproportionately high.

This result should be considered as an alert as it majorly affect the younger age group that is fertility age and the only way out to this condition is hysterectomy. Our focus should be on the early detection of the Adenomyosis.

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