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What is Adenomyosis?

Adenomyosis is defined as 'the presence of endometrial tissue within the myometrium.' (The myometrium is the medical term for the muscular portion of the uterine wall.) In the past, adenomyosis was referred to as 'endometriosis interna' in the medical world, and sometimes as 'inside-out endometriosis' in lay terms. What we commonly call 'endometriosis' can also be called 'endometriosis externa'.

Adenomyoma is the name given to an area of adenomyosis that is encapsulated by myometrial tissue. Because of the presence of adenomyosis, this complex of tissue is differentiated from a myoma, or fibroid tumor.

How Does It Get There?

The bottom line is, we do not know! In 1908, an investigator named T. S. Cullen concluded that adenomyosis was an evolving invagination of the surface epithelium. That means he thought it was an ingrowth of the endometrium from the inside of the uterus. This is one theory.

Some reports have shown that the frequency of adenomyosis is greater in patients who have undergone cesarean sections and intrauterine instrumentation. This is another theory.

A third theory involves metaplasia, that cells that were intended to be inside the uterus never got there.

It does seem likely that retrograde menstruation is not a probable cause.

How Is It Diagnosed?

The diagnosis can only be proven by the pathologists. This requires the microscopic evaluation of the uterus or tissue taken from the uterine wall.

Although it is possible for a surgeon to make the diagnosis by core-type needle biopsy, *the sensitivity is very low*. Unless an adenomyoma changes the natural contour of the uterus, the surgeon has no visual clues as to where the adenomyosis is. Therefore, accurate diagnosis would require multiple biopsy sites going deep into the uterus, plus a generous helping of luck.

Lately, we have heard the claim that MRI can diagnose adenomyosis.

MRI should be expected to be excellent in recognizing uterine masses like fibroids, cysts, and adenomyomas if they reach 5 mm. or greater in size. We expect that it will also add to the ability to differentiate among any of the above. MRI may be able to lead us to expect adenomyosis if the myometrial thickness is increased or the consistency of the myometrium is changed.

Unfortunately, this type of information will probably remain quite nonspecific. I am not hopeful that we will soon be able to rely on it to diagnose the isolated, scattered areas of glands lost among the muscle cells because of their small size. Much work is ongoing to get more information as to the diagnostic accuracy of this technique.

Ultrasonography or MRI may identify glandular islands in the myometrium. But as with pelvic endometriosis, the ultrasound can't usually be specific enough to diagnose endometriosis to the exclusion of other possibilities.

A good gynecologist may suspect adenomyosis based on the clinical factors described below, but the final diagnosis usually has to wait until hysterectomy is performed.

What Are the Symptoms?

Much of the time, a woman has few or no symptoms. However, as the condition worsens, many women begin to be troubled with heavy menstrual bleeding and increasing cramps. On physical examination, a soft, boggy enlargement of the uterus may be detected. I frequently notice an unusual type of tenderness on pelvic exam when the uterine muscle is compressed.

Some adenomyomas are exquisitely tender to touch on pelvic examination and during intercourse.

What Causes Cramps and Heavy Bleeding?

The function of the uterine muscle during normal menstruation is to provide a coordinated involuntary contraction. This contraction reduces the volume of the endometrial cavity and pinches off the large blood vessels passing through myometrium. With adenomyosis, the presence of many tiny islands of functioning endometrial glands scattered in between the normally tightly laced muscle bundles creates numerous little pressure points that can be extremely tender. This creates pain that is worsened when the muscle is contracting. In addition, the efficiency of the contraction is reduced. You can get a sense of what's happening if you imagine the uterus as a person with a mouthful of marbles who is trying to spit. Because the uterine muscle contractions aren't as efficient as they should be, the resulting menstrual flow is heavier.

Most very heavy menstrual bleeding does *not* mean that a woman is shedding substantially more endometrium. The 'endometrial slough' is determined by the size of the uterus and the hormonally induced endometrial thickness. The uterus has large blood vessels that come through the myometrium to feed and supply the endometrium. Really heavy bleeding occurs when the uterine muscle cannot do its job of contracting around these vessels. This is important because after the endometrium is passed out; the basalis layer may be very thin, which could expose the raw muscle surface. This means that the large vessels can pump blood directly into the uterine cavity of the muscle cannot contract well.

Can Adenomyosis Fool You?

Yes! I have made a diagnosis of uterine fibroids many times, only to find out later that the obvious irregularity on the uterus was an adenomyoma.

In my experience at the Center for Endometriosis Care, every time a patient has requested hysterectomy after conservative surgery for endometriosis failed to control severe dysmenorrhea (cramps) or central pelvic pain, adenomyosis has been found in the uterus.

Is Hysterectomy the Only Option?

Conservative treatments can be tried. If the adenomyosis can be visually recognized, as with a localized adenomyoma, local excision or cauterization during laparoscopy can be effective. We have removed many localized areas of adenomyosis with good symptom relief.

Unfortunately, most of the time the disease is scattered invisibly throughout the uterine muscle. Attempts to control the symptoms of deep adenomyosis with endometrial ablation have not been uniformly successful.

Most of the time the decision to perform a hysterectomy is made by the patient who comes to the point that conservative avenues of treatment have been tried and found unsatisfactory and quality of life has declined to unacceptable levels.

Can the Pain and Bleeding be Controlled?

Non-steroidal anti-inflammatory drugs (NSAIDS) are generally excellent prostaglandin inhibitors. Because prostaglandins stimulate the uterine muscle to contract, reducing these compounds may be of great help. These drugs must be started early in the menses and continued regularly to be effective.

Depo-provera will stop all menses. It will usually control the heavy bleeding and cramps but not always the tenderness. The benefits of this drug must be balanced by the cost, side effects, and desire for fertility.

I would expect the LH-RH agonists and antagonists to also reduce symptoms temporarily, if the expense and side effects can be tolerated.