

UT News

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*****"Reversible menopause" being tested
for treatment of female diseases

DALLAS--"Reversible menopause" could be the solution for sufferers of two painful and disabling diseases of the female reproductive system -- endometriosis and fibroid tumors.

Dr. Michael P. Steinkampf, research fellow in reproductive endocrinology at UTHSCD, is investigating drugs called gonadotrophin releasing hormone (GnRH) analogues, which halt the functioning of the ovaries. Both endometriosis (a disease in which the cells from the lining of the uterus become implanted elsewhere in the pelvic region) and fibroid tumors (benign growths of the uterus) are stimulated by the release of estrogen, a hormone produced in the ovaries.

GnRH analogues appear to stop estrogen production effectively -- as happens naturally in menopause -- without causing the masculinizing side effects that occur with current treatments. Not only are the effects of pseudo-menopause reversed once this treatment has stopped, but women whose infertility was the result of one of these diseases also may regain the ability to become pregnant, Steinkampf says.

"The use of this drug might revolutionize much of the practice of gynecology today," Steinkampf says, adding that the treatment also might greatly reduce the number of hysterectomies being performed or delay the need for them for a significant amount of time.

Endometriosis afflicts about 10 million women in the United States and is found in 25 to 50 percent of infertile women. The origin of the disease is uncertain. Any menstruating woman, even a teenager, can be afflicted by the disease.

During a normal menstrual cycle, the lining of the uterus, or endometrium, flows down through the cervix and vagina where it leaves the body. But in endometriosis, retrograde menstruation may occur in which fragments of the endometrial tissue flow upward through the reproductive tract and implant themselves elsewhere in the abdominal cavity. Once there, they form patches of scar tissue throughout the pelvis and around the ovaries and Fallopian tubes. Major problems associated with the disease are infertility and pelvic pain, which can occur during menstruation, urination or sexual intercourse.

Current treatments for endometriosis include surgery, birth control pills or hormone therapy. Sometimes pregnancy reduces the pain. The primary medical treatment is danazol, a synthetic derivative of the male sex hormone testosterone. Danazol prevents the production of estrogen, the hormone responsible for ovulation.

Steinkampf says current treatment options for this disease are often unsatisfactory. "Although danazol is considered an effective treatment for endometriosis, it has bothersome side effects: facial hair growth, weight gain, acne, deepening of the voice and decrease in breast size. Many women find these side effects intolerable," he says.

Fibroids are benign tumors of the uterus that occur in approximately 10 percent of women over the age of 35. They are a common cause of bleeding, pain and infertility. Their size varies greatly. Often these tumors are so small that they are not detectable during a routine pelvic examination. The larger a fibroid is, the more dangerous it is to perform surgery and the greater the chance of infertility.

(more)

Fibroids that are large or cause significant bleeding or pain currently must be surgically removed, usually by hysterectomy. Fibroids account for two-thirds of the hysterectomies being performed today.

Likewise, definitive surgery for endometriosis includes removal of the ectopic, or displaced, endometrial tissue and often removal of the ovaries and the uterus -- something Steinkampf says, "We want to avoid."

Steinkampf's proposed solution is GnRH analogue. Normally, GnRH is released in bursts by the hypothalamus gland, eventually triggering the process of ovulation. But if GnRH is given continuously, the whole ovarian system shuts off and endometrial implants, as well as fibroids, shrink.

"GnRH analogues are more effective in reducing ovarian estrogen production than any other drug used today," Steinkampf says.

Preliminary reports on GnRH analogue treatments have shown excellent results, with endometriosis patients having resolution of pain within a few weeks. The treatment consists of a daily injection for a six month period.

The only side effects of synthetic GnRH treatment parallel those found in menopause -- calcium loss and hot flashes. Steinkampf hopes to eliminate these by prescribing another drug commonly given for these problems.

"One of the goals of my research project is to see how we can minimize these side effects by treating women with GnRH analogues and medroxyprogesterone acetate (MPA) or Provera -- a drug which has been used to treat menopausal hot flashes," Steinkampf says.

Provera has also been shown to reduce the amount of calcium loss in menopausal women.

"I am looking for research volunteers," Steinkampf says. "There are women in the community who are unable to tolerate the side effects of danazol therapy and women of reproductive age with fibroids that could require hysterectomy or excision of the tumors who may want to pursue this as an alternative."

For information about participating in Steinkampf's program, call 214/688-2784.

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NOTE: The University of Texas Health Science Center at Dallas comprises Southwestern Medical School, Southwestern Graduate School of Biomedical Sciences and the School of Allied Health Sciences.

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