

Contact: Diane Shnitzler or Patti Lucas
703-691-1805
April 6- 11 in the press room at
410-649-7400

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UTERINE FIBROID EMBOLIZATION APPEARS TO BE GOOD OPTION FOR YOUNG WOMEN

AT A GLANCE

- ? Young women in their 20s and 30s benefit from uterine fibroid embolization (UFE) with no adverse affects, according to a Johns Hopkins study.
- ? After UFE, hormone levels remained the same, no patients had procedure-induced menopause and uterine wall was thicker, all good indicators for maintaining fertility.
- ? In another study of women who wanted to maintain fertility, there have been 6 pregnancies in 10 women trying to conceive.
- ? After UFE, fibroid symptoms were alleviated in at least 92 percent of patients in both studies.

BALTIMORE – Women in their 20s and 30s who suffer from uterine fibroids can be helped with uterine fibroid embolization (UFE) while apparently preserving their fertility, suggests a Johns Hopkins Medical Institutions study being presented here at the 27th Annual Scientific Meeting of the Society of Cardiovascular & Interventional Radiology (SCVIR).

“All of the patients in the study were 39 or younger and were interested in preserving their fertility. In the past, these

women didn’t have a choice – the only option was myomectomy, although many weren’t candidates,” said Hyun S. “Kevin” Kim, M.D., assistant professor of radiology and surgery, and director of gynecologic intervention, Johns Hopkins Medical Institutions, Baltimore. “Now, many young women can be treated with UFE, most likely maintain their fertility, and they don’t have to go through surgery.”

In a related multi-center study, several women have become pregnant after undergoing a variation of UFE that earlier studies have suggested does not affect fertility.

It is thought that fibroids inside the uterus may interfere with fertility either by preventing implantation of the embryo in the uterine wall, or by interrupting a growing embryo that has already implanted. Fed by hormones, fibroids sometimes grow quite large after a woman becomes pregnant and may leave no room in the uterus for a developing fetus. In many cases, if the fibroids can be shrunk or removed, a normal pregnancy can occur.

Johns Hopkins Study

In the Johns Hopkins study, 29 women ages 20 to 39 underwent UFE with plastic particles about the size of grains of sand, called PVA (polyvinyl alcohol). The particles are inserted in the arteries that feed blood to the tumor, preventing blood from reaching the tumor and causing it to shrink and die. Bleeding and heavy periods were alleviated immediately in 27 (93 percent); 1 patient was retreated and the problem abated, and 1 patient's symptoms eventually resolved so that 1 year after the procedure, bleeding symptoms had been alleviated. None of the women experienced premature ovarian failure, which causes early menopause. Blood tests revealed no significant changes in fertility hormone levels after the procedure.

Although none of the women in the study have become pregnant, Dr. Kim says he knows several women are currently trying and he is optimistic that there will be pregnancies.

“These women had magnetic resonance (MR) imaging 6 months to a year after UFE, and in all cases, the uterine myometrium got thicker after UFE,” said Dr. Kim.

“That’s an encouraging sign in regards to fertility.”

Inova Alexandria/Albany Medical Center Study

There have been a number of anecdotal reports of women becoming pregnant after UFE and researchers are now beginning to document fertility results. In a study at Inova Alexandria Hospital, Alexandria, Va. and Albany Medical Center, Albany, N.Y., researchers performed UFE on 65 women ranging in age from 23 to 52 years old, with an average age of 37, 85 percent of whom wanted to maintain fertility. Of 10 women who said they were actively trying to conceive, 6 have become pregnant, with one of those ending in miscarriage. Four women are currently pregnant, and one has delivered a healthy child. After having UFE, none of the women experienced procedure-induced menopause.

Excessive bleeding stopped in 41 of 43 patients who were followed (95 percent). Bulk symptoms, or a feeling of pressure or heaviness in the abdomen, were completely resolved or significantly reduced in 38 of 41 women who were followed (92 percent), after an average follow-up period of 1 year.

“We used gelatin-sponge particles, which are temporary, so that the uterine arteries can reopen quickly after the fibroid is treated, in order to support a pregnancy,” said Keith M. Sterling, M.D., an interventional radiologist at Inova Alexandria Hospital, and associate professor of radiology at George Washington University School of Medicine and Health Sciences, Washington, D.C. “The women in their 20s and 30s who were actively trying to become pregnant after UFE have had good success.”

UFE is a nonsurgical procedure in which an interventional radiologist makes a small nick (less than ¼ inch) in the skin of the groin to reach the femoral artery, inserts a catheter (a tiny tube) and guides it to the uterus while watching the progress of the procedure via a moving X-ray (fluoroscopy). The interventional radiologist then injects small plastic and/or gelatin sponge particles into the vessels supplying blood to the fibroid to cut off the blood flow, or embolize it. The right and left uterine arteries generally are embolized during the procedure.

Studies have shown that when gelatin particles are used, the fibroids die quickly, but the uterine arteries reopen within weeks or months of the procedure, whereas it may take months or years for the specific feeder arteries embolized with plastic particles to reopen, said Dr. Sterling.

Myomectomy involves surgical removal of the fibroids and can be performed several ways, most often as an open surgical procedure, or laparoscopically, in which the physician makes small incisions in the abdomen and uses a probe with a tiny camera and small surgical instruments to remove the tumor. Most fibroids that cause fertility problems are inside the uterus, and are difficult to reach via myomectomy without cutting the uterus open to remove them, which may compromise the integrity of the uterus, said Dr. Kim.

Co-authors of a study being presented by Dr. Kim are A.N. Wadhwani, A.C. Venbrux, A. Arepally and J.F. Geschwind.

Co-authors of a study being presented at the meeting by Dr. Sterling are: G.P. Siskin, M.M. Ponturo, K. Mandato, K.S. Rholl and J.M. Cooper.

An estimated 5,200 people are attending the SCVIR Annual Scientific Meeting in Baltimore. SCVIR is the professional society of interventional radiologists – physicians who specialize in minimally invasive, targeted treatments performed using imaging guidance. Interventional radiology procedures are an advance in medicine that replace open surgical procedures. They are generally easier for the patient because they involve no large incisions, less risk, less pain and shorter recovery times. To find out more information about interventional radiology procedures or to find an interventional radiologist, visit the SCVIR Web site, www.scvir.org.

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