# Rock-a-bye baby: Uterine fibroid embolization shows fertility rates comparable to myomectomy

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Uterine fibroid embolization, a minimally invasive interventional radiology procedure that blocks blood supply to treat painful uterine fibroids, has a comparable fertility rate to myomectomy, the surgical removal of uterine fibroids, for women who want to conceive, according to the first study on the subject released at the Society of Interventional Radiology's 35th Annual Scientific Meeting in Tampa, Fla.

"This study is significant because it shows comparable fertility rates between the two primary uterus-sparing treatments widely available to treat fibroids: uterine fibroid embolization (UFE) and surgical myomectomy, which is considered the gold standard for symptomatic fibroids in women who wish to conceive," said João Martins Pisco, M.D., an interventional radiologist at St. Louis Hospital in Lisbon, Portugal. "These results are surprising because other studies have favored surgical myomectomy over UFE for women who want to conceive. In this study of 743 women, UFE had a fertility rate of 58.1 percent, which is comparable to surgical fibroid removal (myomectomy), which has a fertility rate of 57 percent," noted Pisco. "Our study proves that UFE not only allows women who were unable to conceive to become pregnant but also allows them to have normal pregnancies with similar complication rates as the general population in spite of being a high risk group," he added. "In the future, UFE will probably be a first-line treatment option even for women who wish to conceive and are unable due to the presence uterine fibroids," he noted.

Uterine fibroids are benign tumors in the uterus that can cause prolonged, heavy menstrual bleeding that can be severe enough to cause anemia or require transfusion, disabling pelvic pain and pressure, urinary frequency, pain during intercourse, miscarriage, interference with fertility and an abnormally large uterus resembling pregnancy. Twenty to 40 percent of American women 35 and older have uterine fibroids, and nearly 50 percent of premenopausal African American women have fibroids of a significant size.

An increasing number of women are delaying pregnancy until their late thirties, which is also the most likely time for fibroids to develop, said Pisco. There is conflicting evidence in the medical literature regarding the impact of fibroids on pregnancy; however, the risk and type of complication appear to be related to the size, number and location. Women may not know they have fibroids (asymptomatic) and undergo in vitro fertilization treatments—rather than getting treatment for fibroids. "We want women to know that uterine fibroids may be a cause of infertility, that their treatment is mandatory and that UFE may be the only effective treatment for some women," said Pisco.

The conventional treatment of uterine fibroids in patients who wish to become pregnant is myomectomy, which is surgical fibroid removal. This treatment is usually effective, particularly if the fibroids are in small number and of small or medium size. UFE, which has a lower complication rate than myomectomy, may be performed if a woman has many fibroids or large-sized fibroids and a gynecologist cannot rule out a hysterectomy (uterus removal) during myomectomy or if myomectomy is unsuccessful.

In the Portuguese study, most women opted for UFE as a fertility treatment after failure of myomectomy or in vitro fertilization or because hysterectomy was the only suggested option. Of the 743 patients who received UFE treatment, 74 wanted to conceive and had been

unable. Of these 74 women, 43 or 58.1 percent (average age, 36.2) became pregnant; the time between UFE and conception ranged from 2 to 22 months. At this time, there have been 36 completed pregnancies, resulting in 30 births (83.3 percent); seven women are still pregnant.

"Most of the pregnancies after uterine fibroid embolization had good outcomes with few complications. The complication rate of the pregnancies was expected to be higher than the general population because these were high-risk patients who had already undergone fertility treatments and were unable to conceive," said Pisco. "However, the percentage of the spontaneous abortions (11.1 percent), pre-term delivery (10.0 percent) and low birth weight (13.3 percent) was the same as the general population," he stated.

Uterine fibroid embolization is performed by interventional radiologists. These physicians are board certified and fellowship trained to perform this and other types of embolization and minimally invasive targeted treatments. An interventional radiologist makes a tiny nick in the skin, about the size of a pencil tip, and inserts a catheter into the femoral artery. Using real-time imaging, the physician guides the catheter through the artery and then releases tiny particles, the size of a grain of sand, into the blood vessels feeding the fibroid, cutting off its blood flow and causing it to shrink and symptoms to subside. Most women return home the same day and can resume normal activities within two to five days afterwards.

Myomectomy is usually major surgery that involves cutting out the biggest fibroid or collection of fibroids and then stitching the uterus back together. Most women have multiple fibroids, and it is not physically possible to remove all the fibroids because it would remove too much of the uterus. While myomectomy is frequently successful in controlling symptoms, the more fibroids the patient has, generally, the less successful the surgery. In addition, fibroids may grow back. Because

of this, myomectomy surgery often needs to be repeated.

This was a small retrospective study based on patients being treated for fibroids by UFE in a single institution, said Pisco. He said that larger, multicentered, randomized prospective studies are needed comparing UFE and myomectomy.

Provided by Society of Interventional Radiology

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