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Bariatric Surgery Could Improve Fertility in Female Patients Study Shows Effect Against Polycystic Ovarian Syndrome by Christina Frangou

Orlando, Fla.—A new study of morbidly obese women suggests that bariatric surgery may effectively treat one of the most common causes of infertility, polycystic ovarian syndrome.

The study has not changed the stance of the American Congress of Obstetricians and Gynecologists, which does not recommend bariatric surgery as one of the treatments for infertility.

But the surgeon researchers, who presented the study at the 2011 annual meeting of the American Society of Metabolic and Bariatric Surgery, say that surgery is an advisable option for women with morbid obesity who are infertile due to polycystic ovarian syndrome (PCOS).

“This study suggests that women with polycystic ovarian syndrome and morbid obesity may have a new surgical option,” said lead author Mohammed Jamal, MD, clinical assistant professor of surgery at the University of Iowa Hospitals and Clinics, in Iowa City.

At this time, however, it’s difficult to strongly recommend Roux-en-Y gastric bypass as a first-line treatment for PCOS in morbidly obese women because too few women have been studied, said Dr. Jamal.

“More research is needed in this area,” he cautioned.

PCOS is emerging as a significant quality-of-life issue for young obese women, as it severely curtails their ability to conceive. As well, the condition is associated with other symptoms, such as menstrual dysfunction and hirsutism, which affect a woman’s quality of life.

In the study, investigators examined the medical records of 566 morbidly obese women who had gastric bypass surgery between 2000 and 2009. Of these, 31 women between ages 22 and 42 years, or 5.5%, had PCOS diagnosed prior to surgery. They had the condition for a mean of 8.6±6 years and were followed postoperatively for a mean of 46.7±35.3 months.

The investigators interviewed 20 women, average age 32, about pregnancies in the years after surgery. (Eleven of the 31 women with PCOS were excluded because they were postmenopausal or lacked adequate follow-up.)

Fourteen women were fertile before surgery or did not wish to become pregnant after surgery.

The remaining six women, who had been diagnosed with infertility before surgery and had sought medical treatment to become pregnant, conceived within three years of gastric bypass surgery.

Women also had reduced symptoms of PCOS after surgery. Menstrual dysfunction, which was present in 85% of cases, resolved in 82%. Of the 70% of patients with hirsutism, 29% had resolution of symptoms. And 77.8% of the patients with type 2 diabetes mellitus had complete remission.

None of the women who conceived following gastric bypass had nutritional complications or a labor-related event.

“Although this is a small study, it has a big result and should be an area for more investigation and should be discussed with morbidly obese women who are having difficulty conceiving,” said Dr. Jamal.

Physicians and third-party payers should recognize PCOS as one of the common comorbidities of severe obesity. As such, it warrants treatment, just like diabetes and sleep apnea, said George M. Eid, MD, associate professor of surgery at the University of Pittsburgh School of Medicine, in Pennsylvania.

“PCOS can be devastating psychologically and socially, affecting women as early as 15 years of age throughout their childbearing years. It’s important to address their problem earlier in life rather than too late,” said Dr. Eid.

He added that more women with PCOS should be enrolled in studies to monitor their outcomes after bariatric surgery.

Many OB/GYNs have reservations about bariatric surgery as a treatment for PCOS-related infertility.

“If we take all the reports of women with PCOS who had bariatric surgery and conceived, we’re talking about less than 200 patients. Those numbers are just too tiny,” said Elizabeth S. Ginsburg, MD, medical director of the in vitro fertilization program at Brigham and Women’s Hospital, Boston.

Dr. Ginsburg does recommend bariatric surgery for some patients with PCOS and for many women, “it’s a very good option, especially if it’s going to help their long-term survival.”

But she would like to see large multicenter studies that can better quantify risks for women and their babies.

“There’s a tendency to think that because women are thinner, some of the obesity-related risks will get better. But we need to study women who have significant weight loss during or before pregnancy and whether that can cause lifelong problems for that baby.”

In 2005, the American Congress of Obstetricians and Gynecologists (ACOG) released a statement on obesity and pregnancy, which did not recommend bariatric surgery as a treatment for infertility and has not been updated.

The organization noted, “as a result of the surgery, many patients who later become pregnant may see a host of complications such as gastrointestinal bleeding, anemia, intrauterine growth restriction, prematurity and neural tube defects. The surgery can also lead to deficiencies in iron, vitamin B₁₂, folate and calcium. On the other hand, pregnancies following bariatric surgery are often less likely to be complicated by gestational diabetes, hypertension, macrosomia (large babies) and cesarean delivery.”

The ACOG recommends obese patients who are pregnant or planning to conceive have preconception consultations and weight loss counseling. Patients should seek information on the risks associated with obesity and pregnancy, and continue nutritional counseling and exercise programs after delivery, according to the statement.

The investigators advise women not to try to conceive until at least 18 months after bariatric surgery due to surgery-related changes that could affect fetal development.

This is the third study since 2005 that indicates gastric bypass and its consequent weight loss can resolve PCOS (*J Clin Endocrinol Metab* 2005;90:6364-6369; *Surg Obes Relat Dis* 2005;1:77-80). Researchers believe that there are multiple mechanisms that drive the symptom improvement after surgical weight reduction, including improvements in hormone regulation and resolution of insulin resistance.