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# Uterine Fibroid Embolization: A Hidden Alternative?

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Uterine leiomyomas, benign smooth muscle tumors, affect up to 70% of certain populations. Although many women are asymptomatic, problems caused by the fibroids such as abnormal vaginal bleeding, pelvic pain, and infertility necessitate treatment in others. In symptomatic women who fail or are not candidates for medical treatment of their fibroids, myomectomy and hysterectomy are usually recommended by gynecologists.

Uterine fibroid embolization (UFE) or uterine artery embolization (UAE), which was first reported as a primary treatment for fibroids in 1995 (1), has been used to treat over 50,000 women since then. The procedure has been demonstrated to be safe and very effective in select patients. UFE has the additional benefits of potentially being an outpatient procedure, avoiding an abdominal incision, and a shorter recovery time. One study of over 200 patients found improvement in heavy bleeding in 90% (95% confidence interval [CI], 86–95%) and a reduction in bulk-related symptoms in 91% (95% CI, 86–95%) (2). Another recently published prospective cohort study of UFE and hysterectomy found UFE to have similar benefit in improving quality of life, with significantly fewer complications than hysterectomy (3). Based on these and other studies, ACOG, in Committee Opinion 293 (February 2004), has become more accepting of UFE, by stating that it provides good relief of bulk and bleeding symptoms with a low complication rate (4).

Embolization of the uterine arteries has assisted obstetricians/gynecologists for over 20 years in treating pelvic hemorrhage after delivery or gynecologic procedures, gestational trophoblastic disease, and

malignancy. UFE is performed by guiding a catheter, introduced into the femoral artery, to both uterine arteries, where tiny acrylic copolymer beads (500–700  $\mu\text{m}$ ) are infused under fluoroscopy until slow flow or stasis occurs and fibroid vasculature is occluded.

With sound scientific evidence attesting to UFE's proven clinical efficacy, at least short-term, as well as increased patient demand for less invasive, uterine-sparing treatments for symptomatic fibroids, why has the number of UFEs not increased over the past several years? Although over 500,000 women undergo hysterectomy yearly, primarily for uterine fibroids, the number of UFEs has remained low. Much recent media attention has focused on this question. A recent front-page article in the *Wall Street Journal* insinuated that the primary reason that gynecologists were not referring or even discussing the option of UFE with appropriate patients was for financial self-interest (5). The issue focuses on the fact that interventional radiologists, rather than gynecologists, perform UFEs. Thus, as has been previously reported, each UFE performed in lieu of a myomectomy or hysterectomy represents an approximate \$1000 financial loss to the gynecologist in Philadelphia currently (this amount may vary regionally) (6).

Although this economic insinuation may unfortunately be true for some gynecologists, there are certainly other factors contributing to gynecologists largely not discussing UFE with patients being offered myomectomies or hysterectomies for fibroids. Many obstetricians/gynecologists are still unfamiliar with the procedure or may have misconceptions regarding its risks and who are potential candidates. It may also reflect the newness of UFE and lack of long-term data on the treatment. Additionally, many interventional radiologists have caused ill will in the

Address correspondence to: Jay Goldberg, MD, Director, Jefferson Fibroid Center, Department of Obstetrics and Gynecology, Jefferson Medical College, 834 Chestnut Street, Suite 400, Philadelphia, PA 19107. E-mail: jaygoldbergmd@yahoo.com.

past by refusing to take care of their post-UFE complications, often neglecting to even have hospital admitting privileges.

Complications after UFE are reported in approximately 1% of patients. These include groin hematomas, nontarget embolizations of other pelvic organs, transient and permanent ovarian failure, and rare instances of uterine necrosis (7–10). When compared with hysterectomy and myomectomy, however, the overall complication, morbidity, and mortality rates associated with UFE are much lower (6).

Certainly not all women with symptomatic fibroids are candidates for UFE. Pelvic infection, current pregnancy, contrast allergy, arteriovenous shunting, renal insufficiency, an undiagnosed pelvic mass or genital tract malignancy, and a history of pelvic radiation are contraindications. Desire for future fertility remains a relative contraindication (4,11,12).

The main question is at this time is whether a proper informed consent for patients being offered myomectomy or hysterectomy, who are also candidates for embolization, requires gynecologists to discuss this treatment option. A recent review in *Obstetrics & Gynecology* clearly states: "Uterine artery embolization must be included as an option in the course of developing a management plan for symptomatic myomas, and this option should be discussed with the patient" (13). Based on a growing body of literature attesting to the efficacy, safety, and its minimally invasive nature, UFE should be discussed by gynecologists with all appropriate patients with symptomatic fibroids, especially those being offered myomectomy or hysterectomy.

*Acknowledgments*—Dr. Goldberg serves as a consultant for Biosphere Medical Inc., Rockland, MA.

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