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Uterine fibroids *Artery embolization emerges as a treatment option*

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IN 1991, A WOMAN WAS admitted to a French hospital for treatment of bleeding secondary to uterine fibroids. She underwent an interventional procedure, embolization of the uterine arteries, to stop the bleeding and prepare her for an elective hysterectomy. Not long after, her bleeding stopped and her fibroids shrank, precluding the need for hysterectomy.

Serendipity

Since 1991, uterine artery embolization (UAE) has emerged as a viable treatment option for uterine fibroid disease. News of the accidental discovery in France has been disseminated rapidly by word of mouth, popular television shows and the Internet. In fact, almost all the patients we have evaluated for the procedure had prior knowledge about it through one of those sources.

Uterine fibroids, or leiomyomata, are an extremely

common gynecological problem occurring in up to 50 percent of all women. Prevalence increases with age until menopause. About 20 percent to 40 percent of women in their 30s and 40s have fibroids. Although fibroids generally start when women are in their 20s, most women do not begin to have symptoms until later.

Growth of fibroids is unpredictable but can increase dramatically during pregnancy. If untreated, fibroids tend to improve or shrink after menopause. In our practice, women with symptomatic uterine fibroids generally come in complaining of exceptionally heavy periods. They may feel pain in the pelvis or back. Or they may experience pain during intercourse. Bulk-related symptoms may occur in conjunction with pressure on the urinary tract or bowel. Occasionally, the complaint

is cosmetic. For example, in thin patients, fibroids can result in protuberance of the abdomen.

The work-up

The initial work-up for uterine fibroids is a thorough history and physical by the patient's gynecologist. A pelvic ultrasound is usually the first imaging study used to confirm the diagnosis. Ultrasound shows the size and location of the fibroids within the uterus. If uterine artery embolization is anticipated, a magnetic resonance scan is helpful in providing a clear anatomical picture of the fibroids within the uterus. It is particularly useful to compare a preliminary MR scan with a follow-up scan, which can show infarction and involution of the fibroids.

The typical candidate for uterine artery embolization is a woman who is in her 30s or 40s, premenopausal, and bothered by heavy bleeding or pelvic pain and pressure related to documented fibroids of significant size. Careful preoperative consultation with the patient must be performed and should cover the risks of the procedure, the benefits and the alternative therapies.

Alternative therapies currently include: drug therapy, such as hormone therapy; surgical myomectomy; or hysterectomy. When hysterectomy is not indicated because of patient preference or the desire for future pregnancy, uterine artery embolization may be a good alternative for management of symptomatic fibroids.

The procedure

The uterine-artery-embolization procedure is performed in the interventional radiology suite using local or regional anesthesia. Women are admitted on a short-stay basis on the morning of the procedure. Outpatients are offered a choice of either epidural or narcotic analgesia. Careful attention to pain management is necessary because infarction of the fibroids — a result of the embolization procedure — can be painful if untreated.

After preparation of the patient, the femoral artery is punctured and a catheter is advanced into both the right and left uterine arteries. Embolization is performed by injecting polyvinyl alcohol particles directly into the uterine arteries. Normal flow into the uterus and the fibroids is usually brisk. Careful flu-