Complications during pregnancy and delivery in women with untreated rectovaginal deep infiltrating endometriosis

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Objective: To study outcomes and complications during pregnancy and at delivery in women with a posterior deep infiltrating endometriosis (DIE) nodule persisting after surgery and diagnosed at transvaginal sonography (TVS) in comparison with a control group of women without endometriosis.

Design: Multicenter observational and cohort study.

Setting: University hospital.

Patient(s): Women (n = 200) with a posterior DIE nodule equal or more than 2 cm centimeters in size who desired a pregnancy and a control group of women (n = 300) with no previous recorded diagnosis of endometriosis who delivered in our clinic during the same time period.

Intervention(s): Patient data collected from medical charts and by phone interviews.

Main Outcome Measure(s): Evaluation of complications during pregnancy and delivery.

Result(s): Of the 101 women with a posterior DIE nodule, 52 become pregnant among whom 25 used assisted reproductive technology. Of these 52 pregnancies, 11 ended in an early abortion, and 41 delivered a baby; 13 (31.7%) had a premature delivery, 7 (17.8%) a placenta praevia, and 28 (68.2%) had a cesarean delivery. When compared with the control group, the women with endometriosis had a higher risk of pregnancy complicated by preterm birth, placenta previa, placental abruption, and hypertension. Cesarean delivery and complications during surgery (hysterectomy, hemoperitoneum, and bladder injuries) were statistically significantly more frequent in women with endometriosis than in controls.

Conclusion(s): Women with an incomplete removal of posterior DIE have a high complications rate during pregnancy and delivery. (Fertil Steril® 2016;■:■–■. ©2016 by American Society for Reproductive Medicine.)

Key Words: Complications at delivery, deep infiltrating endometriosis (DIE), pregnancy complications, transvaginal ultrasound (TVS)

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Many studies have been conducted on the treatment of endometriosis-associated in fertility and pelvic pain; conversely, limited information is available on the obstetric outcomes in pregnant women who have endometriosis. In the past, pregnancy was considered to be therapeutic and a period of relief for patients affected by endometriosis and painful symptoms. However, endometriosis may negatively affect pregnancy in terms of an increased risk of spontaneous miscarriage, intrauterine growth restriction, preeclampsia, antepartum hemorrhage, and cesarean delivery (1–5). Decidualization and modified vascularization of endometriotic implants and endometriomas has been found during pregnancy (6, 7).

Pregnancy complications accompanying preexisting endometriosis may be explained by some pathogenic mechanisms, such as endometriosis-related chronic inflammation (8), presence of adhesions and their mechanical implications (9), and invasion of decidualized ectopic endometrium in to the vessels wall (10, 11). It has also been suggested that pregnancy complications may

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differ on the basis of the type of endometriotic lesion (6, 12). In fact, the presence of DIE lesions in pregnant women has been underestimated, but and such lesions can cause unexpected, severe complications during pregnancy and at delivery (13). The risk of tissue perforation when endometriosis involves the bowel (14) and the bleeding during pregnancy caused by decidualized ectopic implants on the terminal ileum or colon (15) have been described.

Adequate mapping of DIE lesions before pregnancy is mandatory for better counseling the patient about the potential risks related to the disease. We therefore analyzed prospectively outcomes and complications during pregnancy and at delivery in women who were planning a pregnancy and had a remaining deep endometriosis nodule after surgery as diagnosed by transvaginal sonography (TVS) as compared with a control group of healthy women without endometriosis.

MATERIALS AND METHODS

Our multicenter, observational, and cohort study included a group of women with endometriosis and a control group, evaluated between January 2011 and December 2015. The study was approved by the institutional review board. Women with a remaining DIE nodule ≥ 2 cm centimeters in size after a previously incomplete surgery for DIE who wised to conceive were enrolled as the study group (Fig. 1). All these women had had previous surgery for endometriosis in different centers, which was documented by medical charts and histologically confirmed. They had been referred to our clinic which specializes in the diagnosis and treatment of endometriosis and includes an obstetrics department.

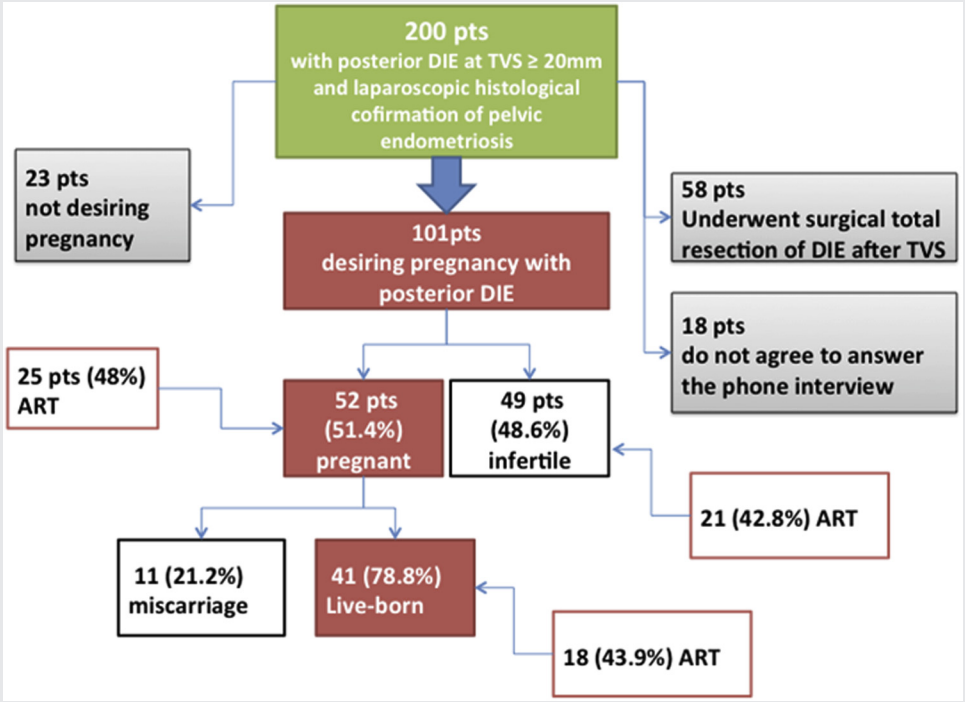
The analyzed control group (n = 300) comprised a random sample from all women (n = 15,862) stored and recorded in the official newborn registration database who had received no previous diagnosis of endometriosis and adenomyosis, who had conceived spontaneously (that is, without assisted reproductive technology [ART]), and who delivered during the same time period in our obstetric clinic. Women with a suspected diagnosis of endometriosis and adenomyosis based on symptoms and clinical evaluation were excluded from the control group.

All women included in the endometriosis group agreed to be contacted by phone 12 months after the TVS examination for detailed information about their pregnancy. In the case group (n = 200), when a pregnancy was confirmed, the clinical notes were revised; in the women who did not become pregnant or those who had an early miscarriage, the medical charts were not analyzed. For the control group, all clinical medical notes were available and examined. The exclusion criteria were endocrine, autoimmune, systemic diseases such as hypertension or diabetes, and others uterine disorders such as leiomyoma and uterine malformations that can affect pregnancy development.

Ultrasound Examination

Before the ultrasound examination for pelvic endometriosis, data were collected on medical history, symptoms, previous

FIGURE 1



Flow chart of the case group recruitment.

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