

Erich Fogg, PA-C, MMSc, DEPARTMENT EDITOR

Barbara Piccirillo, MS, RPA-C  
Truman J. Milling, Jr, MD

### CASE

The patient is a 36-year-old Hispanic woman who presented to the emergency department (ED) with a complaint of first-trimester vaginal bleeding associated with pelvic pain. She described the pain as cramping and nonradiating. The symptoms had started when she woke up that morning and had necessitated the use of one sanitary pad. The patient admitted to urinary frequency but denied dysuria, vaginal discharge, fever, chills, vomiting, or low back or flank pain.

**History** The patient's last menstrual period started 7 weeks previously. Her first prenatal visit was 1 week before at the OB/GYN clinic. She had had three earlier pregnancies; two resulted in normal vaginal deliveries and one in a first-trimester spontaneous abortion. The patient denied a history of sexually transmitted disease, coagulation disorders, or previous surgery. She reported no allergies, medication use, or use of tobacco, alcohol, or illicit drugs. She had a history of hypothyroidism and admitted to noncompliance in taking levothyroxine for approximately 4 months. The family history was unremarkable.

**Physical examination** The patient was in no acute discomfort and was afebrile. Her BP was 120/76 mm Hg; respiratory rate, 20 breaths per minute; pulse, 88 beats per minute (bpm), with negative orthostatic changes. Her breasts were engorged and tender. Results of the pulmonary, cardiac, abdominal, and musculoskeletal examinations were normal. The speculum examination was positive for scant blood in the vaginal vault with a closed cervical os. The uterus was antverted and antiflexed, with a smooth flat fundus. The left adnexa were tender.

**Testing** A urine test result for human chorionic gonadotropin (hCG) was positive. The quantitative beta-hCG level was 113,000 mIU/mL. Urinalysis results were normal with the exception of moderate blood. Results of the CBC also were normal. The thyrotropin level was 14.9 mIU/mL, consistent with hypothyroidism. The patient's blood type was A positive. The antibody screen was negative. Bedside ultrasonography (US) was performed in the ED (see Figure 1).

### WHAT IS YOUR DIAGNOSIS?

- Septate uterine pregnancy
- Ectopic (cornual) interstitial pregnancy
- Molar (trophoblastic disease) pregnancy
- Blighted ovum

Barbara Piccirillo practices in the Department of Emergency Medicine at New York Methodist Hospital, Brooklyn, NY. Truman Milling is chief resident at the New York Methodist Hospital emergency medicine program. The authors have indicated no relationships to disclose relating to the content of this article. Erich Fogg is Assistant Professor in and Program Director of the Physician Assistant Program at the College of Health Professions, University of New England, Portland, Me.

FIGURE 1

### Bedside sonogram



### DISCUSSION

Figure 1 shows a two-dimensional transvaginal cross-section of the uterus. It reveals two uterine cavities with a single fundal contour and a partially septate uterus. In the right uterine cavity, a single gestation sac measuring 3.3x2.9x2.8 cm contains a single fetus. The crown rump length measures 1.7 cm, corresponding to a gestational age of 7 weeks 4 days. In the left uterine cavity, the endometrium is thickened, with scattered anechoic areas representing endometrial hyperplasia, most likely due to hormonal effect. These findings are consistent with a septate uterine pregnancy.

The most common uterine anomalies associated with pregnancy complications are a septate or bicornuate uterus. Differentiating between them on bedside US can challenge the inexperienced clinician. Distinguishing features are on the external surface of the septate fundus, which is normal in contour; the fundus of a bicornuate uterus is indented with varying degrees of separation of the uterine horns.

A septate uterus is caused by incomplete resorption of the adjacent walls of bilateral müllerian ducts during embryogenesis. Obstetric complications include early and late miscarriage, preterm labor, abnormal fetal presentation, and fetal limb malformations. A septate uterus is not always associated with an unfavorable obstetrical outcome.

**Treatment** Surgical management is based on poor reproductive performance. Appropriate candidates for surgery include those with recurrent spontaneous abortion, a single second-trimester loss, or history of preterm delivery. The surgical procedure is hysteroscopic metroplasty and uses concurrent laparoscopy and hysteroscopy. Resection of the septum is performed using microscissors, electrosurgery, or laser. Our patient underwent a scheduled cesarean section, delivering a healthy 7-lb boy and having a simultaneous tubal ligation.

Emergency US is easily learned, but numerous pitfalls exist even for the experienced clinician. The variability of appearance makes interpretation of US images more complex than simply determining whether an intrauterine pregnancy is present. □