

Congenital uterine anomalies: A resource of diagnostic images, Part 1

↻ Accurate diagnosis of such anomalies has prognostic importance for both obstetric and gynecologic outcomes

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A special introduction from **Steven R. Goldstein, MD**, to the full offering of diagnostic images by Drs. Ozcam and Kaunitz, at obgmanagement.com

Uterine malformations make up a diverse group of congenital anomalies that can result from various alterations in the normal development of the Müllerian ducts, including underdevelopment of one or both Müllerian ducts, disorders in Müllerian duct fusion, and alterations in septum reabsorption. How common are such anomalies, how are they classified, and what is the best approach for optimal visualization? Here, we explore these questions and offer an atlas of diagnostic images as an ongoing reference for your practice. Many of the images we offer will be found only online at obgmanagement.com.



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How common are congenital uterine anomalies?

The reported prevalence of uterine malformations varies among publications due to heterogeneous population samples, differences in diagnostic techniques, and variations in nomenclature. In general, they are estimated to occur in 0.4% (0.1% to 3.0%) of the population at large, 4% of infertile women, and between 3% and 38% of women with repetitive spontaneous miscarriage.¹

Classical classification

A classification of the Müllerian anomalies was introduced in 1980 and, with few modifications, was adopted by the American Fertility Society (currently, ASRM). The Society identified seven basic groups according to Müllerian development and their relationship to fertility: agenesis and hypoplasias, unicornuate uteri (unilateral hypoplasia), didelphys uteri (complete nonfusion), bicornuate uteri (incomplete fusion), septate uteri (nonreabsorption of septum), arcuate uteri (almost complete reabsorption of septum), and anomalies related to DES syndrome.²

Anomalies also can be categorized in terms of progression along the developmental continuum, taking into account that many cases result from partial failure of fusion and reabsorption: agenesis (Types I and II), lack of fusion (Types III and IV), lack of reabsorption

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CASE Partial septate uterus identified on 3D coronal imaging

Upon 2D sagittal sonography (A), a left lateral fibroid is identified but otherwise the uterus appears normal. The transverse 2D view reveals a partial septate uterus, with 2 endometrial canals and fibroid (B). 3D coronal imaging demonstrates partial septate cavity and left lateral fibroid (C).

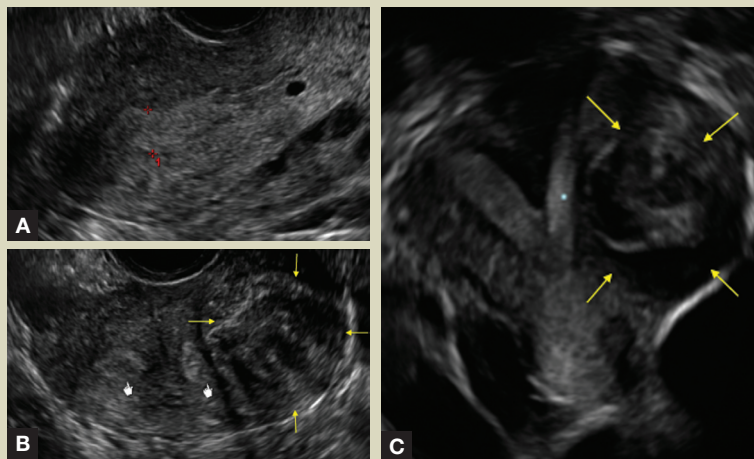
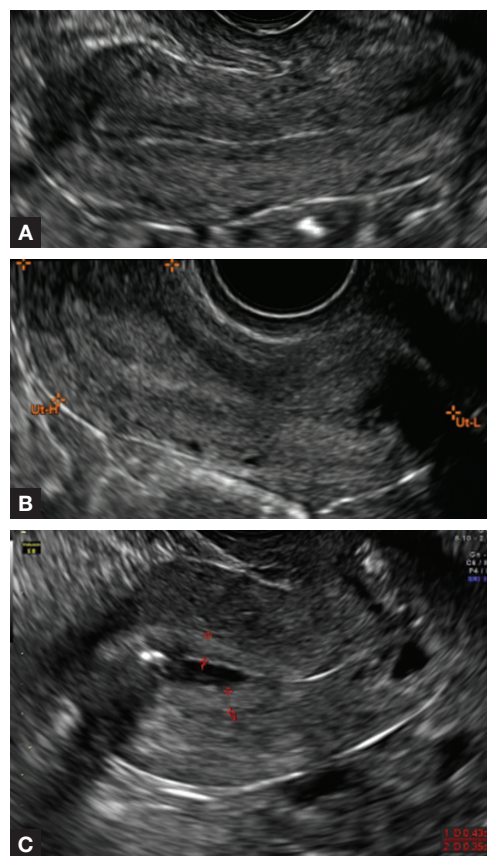


FIGURE 1 Normal appearance abnormal uterus



In sagittal view, a uterus with a congenital anomaly can appear normal. Sagittal views of a normal uterus (A) and didelphic uterus (B) and sonohysterogram of a septate uterus (C).

(Types V and VI), and lack of posterior development (Type VII).³

3D ultrasonography offers accurate, cost-efficient diagnosis

Using only 2D imaging, neither an unenhanced sonogram nor a sonohysterogram can provide definitive information regarding the possibility of a uterine anomaly. The fundal contour cannot be evaluated with 2D imaging; likewise, details regarding the configuration of the uterine cavity (or cavities) may not be appreciated with the use of 2D imaging (FIGURE 1).

To fully evaluate the uterine fundal contour and determine the type of uterine anomaly, it previously was necessary to obtain magnetic resonance imaging (MRI) or perform laparoscopy. Today, however, 3D coronal ultrasonography (US) can allow for accurate evaluation of fundal contour and diagnosis of uterine anomalies with lower cost and greater patient convenience. Several studies have confirmed the high accuracy of 3D US compared with MRI and surgical findings in the diagnosis of uterine anomalies (with 3D US showing 98% to 100% sensitivity and specificity).⁴⁻⁶

ADDITIONAL IMAGES ONLINE

For the full offering of diagnostic images, including normal endometrial cavity, arcuate uterus, incomplete (partial) uterine septum, and complete uterine septum, see the Web version of this article, at obgmanagement.com. Look for Part 2 of this installment next month, when we will present images detailing the unicornuate, bicornuate, didelphic, and DES-exposed uterus.

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