Ultrasound Case Study
A 21-year-old woman presents to the emergency department with heavy vaginal bleeding for 3 weeks.
Ultrasound shows bicornuate uterine configuration with the right (red arrow) and left (green arrow) uterine cavities.

Right ovary (orange arrow) is also visualized.
Normal Uterus

Bicornuate Uterus

A bicornuate uterus results from an abnormal development of the paramesonephric ducts. There is a partial failure of fusion of the ducts, resulting in a uterus divided into two horns.

Overall, congenital uterine anomalies occur in ~1.5% of females (range 0.1-3%). Bicornuate uteri are thought to represent ~25% (range 10-39%) of Mullerian duct anomalies.
Septate Uterus

When the two müllerian ducts fuse but there is incomplete resorption of the intervening septum, a septate uterus results.

Differential Diagnosis

*** Unlike the bicornuate uterine deformity, the septate and arcuate deformities have a normal outer uterine contour. ***

Optimal visualization of the outer contour is important in differentiating among these various anomalies.
Ultrasound shows a hypervascular gestational sac (blue arrow) in the right cornua.

CASE IMAGES

Transverse View
Cornual Pregnancy

an ectopic pregnancy in one of the straight or curved extensions of the body of the uterus. The signs include a uterus that is asymmetric and tender, as well as cramping and spotting. The cornu of the uterus usually ruptures between 12 and 16 weeks of the pregnancy unless the condition is treated surgically to remove the products of conception. In most cases the uterus can be repaired.
Ultrasound shows a cornual ectopic gestational sac (red arrow) and iliac vessels (yellow arrows).
DIFFERENTIAL DIAGNOSIS

- Cornual myoma
- Cornual Abscess
- Endometrioma
Coronal CT images show absence of right kidney (blue circle).
Intraoperative images show **right** and **left** uterine **horns** (green arrows) as well as **right** [cornual ectopic pregnancy](#) (red arrow) and **fallopian tube** (yellow arrow).
**DIAGNOSIS**

- Ectopic cornual pregnancy in a bicornuate uterus with associated renal agenesis

***The difference with the term interstitial pregnancy is that interstitial pregnancies refer to an ectopic location of the gestational sac in the intramyometrial segment of the fallopian tube in a normally configured uterus; however, cornual pregnancy pertains to an ectopic location of the gestational sac in the intramyometrial segment of the fallopian tube in a bicornuate uterus.
The complications of this diagnoses can be grave. There is often a delay in diagnosis for interstitial-type pregnancies as there is increased distensibility of this segment of the fallopian tube, so there is less pain. Timely diagnosis is essential, as rupture of these specific ectopic pregnancies can be life-threatening secondary to their close proximity to the cardinal vessels (specifically the uterine artery).

PROGNOSIS

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BEYOND THE CASE...

- Up to 50% of all ectopic pregnancies are asymptomatic.
- Cornual pregnancies (occurring less than 1% of all ectopic pregnancies) are very rare.
- Urinary tract anomalies commonly occur with uterine configuration variants. The ureteric bud and female genital tract arise from the mesonephric duct embryologically, and commonly with uterine duplication anomalies, there can be urinary tract abnormalities such as renal agenesis, cystic dysplastic kidney, cross fused renal ectopia, and duplicated collecting systems. Renal agenesis has been documented to be the most common.