Gartner duct cysts, the most common benign cystic lesion of the vagina, represent embryologic remnants of the caudal end of the mesonephric (wolffian) duct.1 These cysts are usually small and asymptomatic and have been reported to occur in as many as 1% of all women.1,2

Because the ureteral bud also develops from the wolffian duct, it is not surprising that Gartner duct cysts have been associated with ureteral and renal abnormalities, including congenital ipsilateral renal dysgenesis or agenesis, crossed fused renal ectopia, and ectopic ureters.1,3–7 In addition, associated anomalies of the female genital tract, including structural uterine anomalies (ipsilateral müllerian duct obstruction, bicornuate uterus, and uterus didelphys) and diverticulosis of the fallopian tubes, have been described.6,8,9

Transabdominal and transrectal ultrasonographic depiction of Gartner duct cysts have been reported previously.2,5,7,10 Here we report the transvaginal ultrasonographic findings of this condition.

Case Report

A 35-year-old gravida 5, para 2 patient had an anatomic survey at 22 weeks gestation. Her obstetric history was unremarkable, including 2 previous vaginal deliveries. At 4 years of age she had undergone surgical repair of bilateral vesicoureteric reflux. The survey showed an appropriate-for-gestational-age fetus with normal-appearing midtrimester anatomic characteristics. The uterine cervix measured 4 cm in length and was closed. Distal to the external os of the uterine cervix, an ill-defined cystic structure measuring 2 cm in diameter was depicted (Fig. 1). Initially, this finding was considered consistent with a nabothian cyst. Because of the lack of definitive cervical tissue around the cyst, transvaginal ultrasonography was performed to further define this structure (Figs. 2 and 3). Sagittal transvaginal scanning (Fig. 2) depicted a well-
defined cystic mass on the anterolateral aspect of the upper vaginal vault adjacent to, yet clearly separate from, cervical tissue.

Transverse transvaginal scanning confirmed these findings and depicted the cyst lateral to the uterine cervix (Fig. 3). At this stage, the presence of a Gartner duct cyst was considered. Physical examination with a vaginal speculum confirmed the presence of a cystic structure on the anterolateral aspect of the upper vaginal vault measuring 2 cm in size, consistent with a Gartner duct cyst. Both maternal kidneys were depicted ultrasonographically and appeared normal. The pregnancy continued uneventfully, and the patient was delivered of a healthy infant at term. At her 6-week postpartum examination, the presence of the Gartner duct cyst was again confirmed, and expectant (nonsurgical) follow-up was planned.

Discussion

The differential diagnosis of cystic structures located in the upper vagina and uterine cervix includes nabothian cysts, Gartner duct cysts, and, rarely, specific obstructed müllerian duct anomalies (usually uterus didelphys with obstructed hemivagina). The latter are not true cystic lesions and usually contain echogenic contents (obstructed menstrual debris), and patients with these lesions commonly have cyclic symptoms (primary dysmenorrhea). In contrast, patients with nabothian cysts or Gartner duct cysts are usually asymptomatic.

Ultrasonographic depiction of cystic structures within the uterine cervix are not uncommon, and these usually are considered to represent nabothian (retention) cysts, reported to range between 6 and 20 mm in diameter and located eccentric to the cervical canal. Gartner duct cysts also may be depicted in close vicinity to the uterine cervix and also should appear eccentric to the cervical canal. Precise and accurate imaging distinction between these 2 separate clinical entities may be
challenging with the transabdominal ultrasonographic approach, especially with regard to small, isolated cysts. With transvaginal ultrasonography, the transducer is placed in immediate proximity to the cyst and cervix, enabling accurate diagnosis and clearly differentiating between Gartner duct and nabothian cysts, as depicted in our case (Fig. 2). Similarly, transrectal ultrasonography was applied in the assessment of vaginal disease and diagnosis of 2 cases of Gartner duct cysts. Nevertheless, transvaginal ultrasonography appears a more direct imaging modality for vaginal and cervical lesions.

The clinical importance in correct diagnosis between patients with Gartner duct cysts and those with cervical inclusion cysts is the previously mentioned association of the former with ureteral, renal, and structural female genital tract anomalies, some of which may require surgical treatment.1,3–10

Our case shows the enhanced ultrasonographic imaging clarity of a Gartner duct cyst when using the transvaginal compared with the transabdominal approach.

References