**Unilateral benign cystadenoma in a broodmare**
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**Significance**
This following case demonstrates continued reproductive success in a broodmare with long-term benign unilateral ovary enlargement.

**Case report**
A 23-year-old Quarter Horse mare was presented for unilateral ovarian enlargement discovered during routine breeding management. The left ovary, cervix, uterine body and uterine horns were normal on transrectal palpation and ultrasonography, and there was evidence of cyclicity. The right ovary was grossly enlarged and ventrally displaced. The ovary had an irregular round contour and a rough surface. The ovulation fossa could not be palpated. Using transabdominal ultrasonography through the flank, the entire right ovary could be imaged. Multiple 20-80 mm anechoic fluid-filled structures were present throughout the entire ovary. Normal ovarian parenchyma could not be visualized. Serum estradiol, testosterone and inhibin concentrations were all within normal limits. Based upon its size, ultrasonographic characteristics, and the absence of an endocrine contribution, the differential diagnoses were cystadenoma, germinal inclusion cysts, cystic rete ovarii, or cystic degeneration of other areas of the intra-ovarian mesonephric tubules (e.g. cystic epiophoron or paraophoron). Removal of the mass by ventral midline laparotomy was recommended because the ovary size prevented any other surgical approach. Despite the guarded prognosis for failure to removal, the owner declined surgery due to cost. The mare was subsequently bred over the next five breeding seasons and delivered four healthy foals.

**Follow up**
Two years following delivery of her last foal, the mare re-presented for significant weight loss and hepatopathy was diagnosed on the basis of elevated liver enzymes. Ultrasonography of the right ovarian mass showed no change in size or echotexture. Euthanasia was elected by the owner at this time. Necropsy revealed a cirrhotic liver, severe cardiomegaly, and hemoabdomen that were independent of the enlarged ovary. The right ovary was 18 cm in diameter with multiple cystic structures and fibrous tags on the ovary surface. Histologically, the epithelial lining was very uniform with columnar epithelial cells that were occasionally ciliated. There was no evidence of cellular atypia and the mitotic index was very low. The stroma contained compressed ovarian structures. Based upon these findings, a definitive diagnosis of benign cystadenoma arising from either the ovulation fossa or fimbria was made. In a previous report on an equine ovarian cystadenoma, plasma testosterone concentrations were high at the time of examination, but decreased to normal values after removal of the cystadenoma. This endocrine involvement differed from the present case because despite multiple evaluations over the course of seven years, serum estradiol, testosterone and inhibin concentrations always remained within normal limits.

**Keywords:** Cystadenoma; equine; ovarian tumor; ultrasonography

**Reference**