

## **Diagnosis and management of cystic endometrial hyperplasia in a potbellied pig**

Julie Strachota,<sup>a</sup> Carrie Jacobs,<sup>a</sup> Dalen Agnew,<sup>b</sup> Jennifer Roberts<sup>a</sup>

<sup>a</sup>Department of Large Animal Clinical Sciences

<sup>b</sup>Department of Pathobiology and Diagnostic Investigation

College of Veterinary Medicine, Michigan State University, Lansing, MI

Cystic endometrial hyperplasia (CEH) has been reported in many species, including humans. Endometrial cysts arise from the glandular epithelium. As the condition progresses, endometrial polyps develop from larger cysts. Depending on the species, CEH leads to infertility and predisposes females to a variety of uterine conditions including neoplasia and pyometra. In September 2018, an 8 year old intact, nulliparous female potbellied pig was presented for evaluation of tissue prolapsing from her vulva. The owner noticed prolapsed tissue 30 hours prior to her presentation and reported the pig was in estrus. An irregularly shaped, dark red tissue (~ 8 cm long) with a black perimeter protruded from her vulva. Under general anesthesia, digital palpation determined that the tissue was prolapsed through her cervix. The tissue was ligated, amputated, and submitted for histopathology. Results confirmed that the tissue was uterine in origin and supported the diagnosis of CEH, although neoplasia could not be ruled out. Ovariohysterectomy was recommended. In October 2018, a routine ovariohysterectomy was performed under general anesthesia. The uterine horns were significantly enlarged with engorged vasculature. A 6 cm stalk of tissue was noted on the serosa of the lateral aspect of the left uterine horn. Transection and hemostasis of the broad ligament was achieved using a vessel sealing and tissue dividing device (LigaSure<sup>TM</sup>). The patient recovered uneventfully and was hospitalized for observation overnight. Histopathological examination of the tissues revealed chronic, diffuse cystic endometrial hyperplasia with no evidence of neoplasia. Numerous edematous and necrotic polyps were noted projecting from endometrial cysts. The serosal polyp identified at surgery contained endometrium, indicating that adenomyosis had also occurred. Protruding tissue excised during initial presentation was a large necrotic polyp originating from the cystic endometrium. Prevalence of CEH in aged potbellied pigs has been reported to be as high as 75%, with incidence of neoplastic lesions as high as 60%. The incidence of uterine pathology in potbellied pigs is high because these animals are long lived and often nulliparous pets. Therefore, to decrease the risk of developing uterine disease such as CEH and uterine neoplasia in pet pigs, ovariohysterectomy should be performed as early as possible.

**Keywords:** Cystic endometrial hyperplasia, potbellied pig, reproduction, uterus

