Hydrops and unusual placentation in a mare: a case report
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A 20 year old multiparous Quarter Horse broodmare in the eighth month of gestation presented to the Iowa State University Equine Theriogenology service with a history of progressive abdominal distension causing discomfort and hind limb lameness. The mare had previously been diagnosed and was being treated for equine pituitary pars intermedia dysfunction (PPID) with pergolide mesylate. She also had an incidental non-symptomatic first degree AV block. The mare’s vital parameters were within normal limits; however the mare seemed uncomfortable and depressed upon physical examination. Based on the presenting signs, a tentative diagnosis of fetal hydrops was made. To confirm this diagnosis, the mare was evaluated by trans-rectal palpation, trans-rectal ultrasound, and trans-abdominal ultrasound. Trans-rectal examination revealed a fluid-filled distended turgid organ at the pelvic brim that revealed hypoechoic fluid with swirling particulate matter. No fetal parts or normal reproductive tract could be palpated. Upon trans-abdominal ultrasound, a live fetus with a heart rate of 96 bpm could be identified in the caudal abdomen. At the level of the fetal thorax, an oval mass 17 cm in diameter containing hypoechoic fluid could be identified. Excessive allantoic fluid could be seen further confirming a diagnosis of hydrops allantois. Due to the advanced age of the mare, previous fertility problems and prior parturitions, and health issues of the mare (PPID, arrhythmia), the owner elected for humane euthanasia. Postmortem examination confirmed the hydrallantois diagnosis with 40 gallons of yellow fluid evacuated from the allantoic sac. A 32 cm cyst-like structure was found within the amniotic sac adjacent and contained two gallons of bright yellow, slightly viscous, flocculent fluid. The surface opposed to the amniotic membrane was bright red and appeared similar to the chorioallantois. There was abundant, small, friable white to tan particulate material within the fluid and on the inner surface of the cyst-like mass. Microscopic examination of the fetal membranes revealed mineralization, edema and splitting of the allantoamnion, the latter corresponded with the fluid-filled sac appreciated during gross postmortem examination. The microscopic changes described within the uterus are likely within normal range for a multiparous, aged mare. Mineralization of the placenta can occur and is not likely of clinical significance. The fetus had a crown-rump length of 57.7 cm and appeared normal for the stage of gestation. Hydrallantois is a relatively uncommon complication of pregnancy in equines. The cause of hydrops is unknown but abnormalities in fluid production and absorption, vascular abnormalities and possibly genetic factors are thought to play a role. Hydrallantois typically leads to very dramatic abdominal distention are at risk of prepubic tendon rupture or abdominal herniation due to stress placed on the abdominal wall and foals of affected mares are often abnormal and may have torticollis or other abnormalities.

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