Successful treatment of presumptive cystic ovarian disease in okapi (*Okapia johnstonii*)

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A 7 year old parous, female okapi was presumptively diagnosed with cystic ovarian disease (COD) based on persistent estrus behavior and a lack of conception, despite continued breeding. In non-domestics, routine diagnostics (serum hormones and transrectal ultrasonography) are challenging, even with intense behavioral training and may still require general anesthesia. Diagnosis of COD is even more difficult in giraffids, as inter estrus intervals are only 14 days, duration of estrus is 2 - 3 days, estrus signs can be subtle and breeding behavior can be related to dominance. Since evidence is obtained mainly by observation, experienced keepers and meticulous recordkeeping are key for a presumptive diagnosis. This female was trained for tactile contact, but not for transrectal ultrasonography or blood collection. During full anesthesia (medetomidine, ketamine and thiafentanil), on transrecal ultrasonography, the right ovary contained a large (34 x 29 mm) thick-walled (9 mm) structure containing hyperechoic fluid. The left ovary appeared normal in size without large antral follicles and the uterus lacked endometrial edema. Serum progesterone (2.9 ng/ml) was consistent with active luteal tissue and 2 doses of dinoprost (12.5 mg) were given IM 48 hours apart. Three days after the second dose she displayed estrus behavior. Four weeks after initial examination, a 12 mm follicle with clear fluid and thin walls, was present on the right ovary and the uterine horns were edematous. Ovulation was induced with IM deslorelin (3.4 mg) and hCG (5,000 IU). She went through 3 apparently normal cycles without conceiving, whereas during the fourth cycle, estrus lasted 7 days. Ovulation was induced again and she conceived as documented by increased and sustained fecal progesterone metabolites. Fetal sex (male) was determined at ~ 7 months gestation via transabdominal ultrasonography.

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