Proceedings of the 8th International Symposium on Canine and Feline Reproduction
ISCFR
June 22-25, 2016
Paris, France

In a joint meeting with the XIX EVSSAR Congress

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Ovarian cysts in a white lioness: diagnosis and surgical cyst removal
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Ovarian cysts are a known cause of infertility in the bitch and to a lesser extent in the domestic queen. This clinical case describes this pathology for the first time in a Big cat: wild white lioness. From the diagnosis (by trans-abdominal ultrasonography) to a surgical treatment by a cyst resection, leaving the ovaries intact, when hormonal treatments and ultrasound-guided aspiration have failed to solve the problem. A 12 years old wild white lioness «Zihra», was presented with a history of infertility since 2009 and permanent anestrus since 2012. The lioness gave birth once to three cubs in 2009. A Suprelorin 4.7 mg® (Virbac, France) (deslorelin 4.7mg® implant) had been inserted after birth (as was done in 2006). In 2012, few weeks of estrus and one history of repeated mating without resulting in pregnancy have been reported. No estrous signs were observed since then. In 2014, an exploration of infertility was conducted. General health and external genital tract seemed normal. Vaginal cytology was in favour of an interestrus or end of diestrus period: moderate number of cells, 60% parabasal cells, 20% small intermediate and 10% large intermediate cells). Plasmatic progesterone (Ovucheck®, BVT© ; Minividas®, Biomérieux©) was higher than to 5 ng/ml. Genital ultrasonography showed one single round-shaped anechoic cavity 1.8 cm in diameter. Bilateral corpora luteal cysts were suspected. In order to induce luteolysis of the cysts and retrigger the estrous cycle, medical protocols were first attempted: cloporostenol (ESTRUMATE®, MSD, France), 2.5 µg/kg, dart injection, once a day, three consecutive days. Followed one week later by an eCG single dart injection (CHRONOGEST® PMSG, MSD, France (, 1000 IU). No signs of heat were observed in the following two weeks. Then, a deslorelin implant (Suprelorin 4.7®, MSD, France) was implanted (SC, post-umbilical area) and removed a week later in order to induce estrus as in domestic cats (1). No heat was observed immediately after implantation or in the following months. CRESAM team decided to remove the ovarian cyst surgically as described in dogs (2). A surgery platform was set in the GWLPT lodge and general anaesthesia follow-up by Dr Pete Rogers. The surgical instruments used for the dissection of the ovarian cysts were: a loupé, a Castroviejo corneal scissors or a Bonn micro scissors and a Harms-Tubingen tying forceps. The ovaries were reached by a midline laparotomy (less tension on the suspensor ovarian ligament and its vessels than in bitches). Each cyst was puncture with a 23-G needle and aspirated (0.8 ml). Then the cysts were rinsed and filled with sterile NaCl 0.9% to allow a better identification. The cysts were removed from the ovarian stroma by dissection of the cleavage zone. Ovarian bleeding was limited during dissections. The ovarian cortex was sutured with an absorbable monofilament 5-0 (Biosyn®, Vétoquinol, France) suture material. There was no major surgical complication and the ovaries returned to a normal ultrasound appearance (absence of inflammatory reaction, no cyst recurrence a week later). This clinical is the first to diagnose a luteal cyst in a lioness. This case describes also a surgical approach for ovarian cyst treatment in felids as alternative to surgical treatment such as ovariectomy.