Diagnosis and treatment of a functional follicular cyst in a Persian queen cat: A case report

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Key words:
Follicular ovarian cyst, cystic ovarian disease, cat

Abstract:
In the present report, diagnosis and treatment of a case with follicular ovarian cysts in a 5-year-old Persian queen cat is described. In response to palpation of spines, the queen cat presented herself in lordosis and danced up and down with her rear legs. Trans-abdominal ultrasonography examination showed 2 cysts in the left ovary of the queen. Serum estrogen assay indicated elevated level of 17 β-estradiol concentration (105 pg/ml). However, progesterone concentration was normal (0.3 ng/ml). Accordingly, the queen was diagnosed with functional follicular cysts. The queen was treated with an administration of hCG intra-muscularly. Thirty (30) days after the administration of hCG, an injection of equine chorionic gonadotropin (eCG) (50 IU) was given intra-muscularly. Natural mating was done with a fertile Persian tom cat. In conclusion, it seems that treatment of functional follicular cysts can be applied to preserve fertility in cats.

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Received: 12 January 2015
Accepted: 27 April 2015

Case History

The interest in pedigreed cats has been growing around the world over the last years. The widespread appeal of pedigreed cats means that veterinarians and breeders must be familiar with the unique characteristics of feline reproduction and breeding management, to design and carry out successful breeding programs. The domestic cat is used widely in biomedical research and is important as a model for reproductive studies of rare or endangered Felidae (Wildt et al., 1986; Wildt et al., 1987).

Ovarian cysts, commonly arising from mature or atretic follicles, fail to ovulate and persistently remain in the ovary, thereby inhibiting re-establishment of folliculogenesis and consequently rendering the queen sub fertile (Gharagozlou et al., 2014). Follicular cysts are thin-walled ovarian structures, which could be single or multiple and may be unilateral or bilateral (Johnston et al., 2001). The most common type of ovarian cyst is the functional follicular cyst, which secretes estrogen (Johnston et al., 2001). Follicular cysts could cause behavioural disorder like prolonged oestrus, bone marrow suppression and uterine hyperplasia due to prolonged elevation of oestradiol. Follicular cysts could be diagnosed based on behavioural signs, ultrasonography and evaluation of serum oestradiol (Gelberg et al., 1984; Johnston et al., 2001).

In cases of follicular cysts, medical therapy is aimed at inducing ovulation or luteinization using either gonadotropin releasing hormone.