

Hydrometra and Endometrial Hyperplasia in a Cat with Follicular Cyst

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Abstract

A cat was admitted to the clinic of the Department of Obstetrics and Gynaecology, Faculty of Veterinary Medicine, Ankara University, with the signs of colic, abdominal tension, polydipsia and weakness. According to anamnesis (by the client), the cat was 8-month-old and had mated 30 days prior to the clinical examination. Although the ultrasonographic findings showed anechoic areas in the uterus, no signs of expected pregnancy were found. The patient was received operation because of large anechoic areas determined by ultrasound and high abdominal tension. Histopathological examination of the uterus revealed hydrometra and endometrial hyperplasia together with follicular cyst in the left ovarium.

Key words: Cat, Endometrial Hyperplasia, Hydrometra, Follicular Cyst

INTRODUCTION

Hydrometra and mucometra (defined as the accumulation of non-inflammatory, clear to slightly cloudy, watery to viscid, sterile fluid in the uterine lumen) occur occasionally in the cat. Impatency of the vulva, vagina, cervix or uterus resulting from congenital anomaly, neoplasia, inflammation and scarring or accidental ligation leads to hydrometra and mucometra. The volume of the fluid in the uterine lumen may be as high as 500 ml [1]. Therefore, the uterus could be thin-walled [2]. Normal pregnancy may be distinguished from hydrometra and mucometra by monitoring the presence of a fluid-filled uterus in the absence of a foetus(es) with the use of B-mode ultrasound imaging [3].

Ovarian cysts have been reported to be common in the cat and their frequency may to increase with age. Follicular cysts that arise from mature or atretic follicles are reported to be the most common type. However, their aetiology in spontaneous diseases is unknown [1].

Case History

A cat was referred to the clinic of the Department of Obstetrics and Gynaecology, Faculty of Veterinary Medicine, Ankara University, with the signs of colic, abdominal tension, polydipsia and depression for 7 days. According to anamnesis, the cat was 8-month-old and had mated 30 days prior to the clinical examination. During the examination, the cat was in good physical condition (with positive appetite) and its rectal temperature was within normal values (38.5 °C). Ultrasonographic examination revealed anechoic areas in the uterus, but no signs of any pregnancy (expected to be 30-day old) were detected [Figure 1].

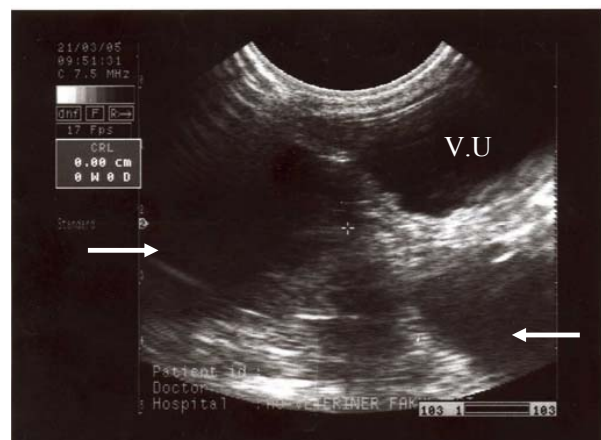


Figure 1. Ultrasonographic view of a large anechoic zone in the uterus

V.U.: Vesica urinaria

The cat was premedicated with atrophine sulphate (0.04 mg/kg, SC) and xylazine hydrochloride (2 mg/kg, IM). General anesthesia was induced using ketamine hydrochloride (10 mg/kg, IM). Ovariohysterectomy was performed at the left fossa paralumbalis. The uterus presented a bilateral increase in the dimensions of the horns (right and left: 17.0 and 13.0 cm in length and 4 cm in diameter both, respectively). Abel, [4] observed a uterine horn with a diameter of 4.5 cm in a cat with hydrometra. The uterus was preserved in 10% formaline until histopathological examination. Following the operation, cefazolin sodium (125 mg twice a day for 5 days, IM) was given. A liquid diet was supplied for 3 days.

RESULTS AND DISCUSSION

Eight days after the operation, the skin sutures were removed and a complete recovery (of the clinical signs) was achieved.

According to the histopathological examinations by a private Pathology laboratory (Buyuk Ankara Laboratuvarlar Grubu, Ankara-TR; dated on 26/03/2005 with protocol number 3187), the uterus had expanded cystic glands in the endometrium. In the myometrium, there was excessive enlargement in blood vessels containing erythrocytes in their lumen. A cystic mass with a single luminal surface and thin wall covered with flattened epithelial cells were detected in the left ovarium. Although progesterone was reported to play a major role in the aetiology of hydrometra in various species [2], Payan-Carreira et al., [5] observed a granulosa cell tumour in one of the ovaries in a bitch with hydrometra. In the latter study, there was a high oestrogen concentration of sera that was presumably leading to fluid accumulation in the uterus. The fluid produced as a consequence of this chronic stimulation of the oestrogen receptors inevitably caused the enlargement of the uterine horns. In other species, hydrometra has been associated with chronic stimulation of oestrogen receptors by exogenous substances [6].

Granulosa tumours are one of the possible sources of endogenous oestrogens [1-5]. Undoubtedly, the follicular cysts are also one of the other major sources. Therefore, we presumed that the follicular cyst in one of the ovaries may have played a role in the development of hydrometra, through the stimulation of the oestrogen receptors.

The present study reports a case of cystic endometrial hyperplasia and hydrometra with follicular cyst in an 8-month-old cat following ovariohysterectomy and histopathological examination of the uterus.

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