



University, Vocational School of Elbistan, Department of Veterinary Science, Kahramanmaraş, TÜRKİYE.



# Ovarian Cyst in a Dog

Bir Köpekte Ovaryan Kist

# ABSTRACT

Ovarian abnormalities are commonly congenital pathologies in the reproductive organs. This report presented a case of ovarian cyst and agenesis observed in a dog. The case was observed a 4-year-old mixed-breed female dog. This animal had previously given birth and required sterilization. The diagnosis was made during the ovariohysterectomy. The uterus and ovaries were examined after surgery. The uterine horns and the left ovary were normal. However, instead of the ovarian tissue, a cyst was found in the location of the right ovary. This cyst was surrounded by a thin membrane and it was filled with fluid. This structure was considered as congenital. As a result, unilateral ovarian agenesis and cyst had no effect on reproduction.

Keywords: Agenesis, Congenital, Cyst, Female Dog, Ovary.

# ÖZ

Ovaryum anomalileri, reprodüktif organlarda yaygın olarak görülen konjenital patolojilerdir. Bu raporda, bir köpekte gözlenen ovaryum kisti ve agenezisi sunuldu. Vaka, 4 yaşında melez bir dişi köpekte görüldü. Bu hayvan, daha önce doğum yapmış ve kısırlaştırılma isteğiyle getirilmiştir. Tanı, ovaryohisterektomi sırasında konuldu. Uterus ve ovaryumlar operasyon sonrası incelendi. Kornu uteriler ile sol ovaryumun normal olduğu görüldü. Ancak, sağ ovaryumun olması gereken yerde bir kist bulundu. Bu kist, ince bir zarla çevriliydi ve içi sıvı doluydu. Bu yapının konjenital olduğu düşünüldü. Sonuç olarak, tek taraflı ovaryum agenezisi ve kistinin üreme üzerinde herhangi bir olumsuz etkisinin olmadığı görüldü.

Anahtar Kelimeler: Agenesis, Konjenital, Kist, Dişi Köpek, Ovaryum.

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Sorumlu Yazar/Corresponding author: Zahid PAKSOY E-mail: paksoyland@hotmail.com Cite this article: Paksoy Z. Ovarian Cyst in a Dog. J Vet Case Rep. 2024;4(2):31-33.



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#### **INTRODUCTION**

Ovarian disorders have been observed in animals. These include anomalies such as agenesis, hypoplasia, cysts, and atypical development. These disorders, which affect the reproductive system, may have a congenital origin. Ovarian agenesis is a rare pathology in cats and dogs. It can develop unilaterally or bilaterally. The absence of an ovary may be accompanied by aplasia or hypoplasia of the fallopian tube and uterine horn. In unilateral cases, the diagnosis may not be made because the contralateral ovary can still function normally. In bilateral cases, the fact that the animal has not reached puberty may be an important clue. This prevents the onset of estrus in the animal and results in sterility. The definitive diagnosis is usually made during laparotomy.<sup>1-5</sup>

Another important condition that can be seen in dogs is ovarian cysts. The most common pathology involves the presence of a cystic mass in the ovary. The cyst may be either follicular or luteal in structure. Luteal cysts typically do not cause obvious symptoms, while follicular cysts often produce estrogen. As a result, estrogen levels increase and nymphomaniac behaviors occur in the animal. These cysts can be unilateral, bilateral, or multiple. Hormonal treatment can be used for cysts. However, the most effective treatment is ovariohysterectomy.<sup>4,6</sup>

In the present case, a fluid-filled cystic ovary was found in a female dog that had previously given birth, during an ovariohysterectomy.

## **CASE PRESENTATION**

In this report, a case of ovarian agenesis and cyst in a dog case was presented. The animal was a 4-year-old mongrel bitch. According to the anamnesis, this dog had previously given birth. Subsequently, it was brought to a private veterinary clinic by its owner for neutering. During the pre-operative examination, the animal's vital parameters were found to be normal, and it was decided to perform an ovariohysterectomy. General anesthesia was induced with intramuscular xylazine (1 mg/kg) and ketamine (10 mg/kg). The incision area was shaved and treated with antiseptics. After that, the abdominal cavity was accessed through the median line. The uterus and ovaries were ligated and removed.

The diagnosis was made after the sterilization surgery. During the post-operative examination, it was observed that the cervix, corpus and uterine horns were of normal structure. However, upon examining the ovaries, it was found that left ovary was normal (Figure 1a), while a cystic structure was present in the bursa ovarica on the other side (Figure 1b). The cyst measured 10 mm size. It was surrounded by a thin membrane and filled with fluid. The fluid was observed to be serous and clear (Figure 1c).



Figure 1. a) Normal ovary located on the left side.b) Cystic structure on the right side.c) Appearance of the cyst after clearance of surrounding structures.

## DISCUSSION

Ovarian agenesis is a rare condition in dogs and can cause infertility or sterility if it develops bilaterally. In the presented case, a cystic structure was associated with unilateral ovarian agenesis. Despite this, animal's fertility was not affected because the agenesis was unilateral.<sup>2,7-11</sup>

Ovarian cysts are divided into different types: follicular cysts, cysts of subsurface epithelial structures, cystic rete ovarii, lutein cysts and cystic corpora lutea.<sup>2,12</sup> Follicular cysts that produce estrogen lead to hyperestrogenism in animals, causing nymphomaniac behavior. However, animals do not mate even though under the influence of estrogen.<sup>6</sup> Luteal cysts are rarer and secrete progesterone.<sup>2</sup> In the present case, the animal mated and gave birth to pups. Therefore, it is likely that the cyst was inactive and the structure was considered as congenital.

As a result, we concluded that unilateral ovarian agenesis did not cause infertility in this case. Furthermore, the cystic structure was inactive and the animal displayed normal sexual activity. Since this case had both an agenesis and a cystic structure, it was thought that its presentation could be useful.

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