



Remnant Ovarian Syndrome in a Non-descript Indian Dog

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Received: September 26, 2023

Published: December 11, 2023

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Abstract

A six-year-old spayed Indian non-descript dog was presented at the clinic with a history of vaginal bleeding from the last one week, which had also occurred the previous year. Exploratory vaginal cytology, ultrasonography, and serum progesterone values led to the diagnosis of remnant ovarian syndrome. The condition was successfully treated through exploratory laparotomy followed by the removal of ovarian remnants two weeks after the estrous cycle.

Keywords: Remnant; Ovarian Syndrome; Non-descript; Indian Dog

Introduction

A six-year-old spayed Indian non-descript dog was brought to the clinic due to a recent episode of vaginal bleeding. The dog had undergone ovariectomy five years prior. Physical examination revealed thickening of the vulval region and the presence of dark blood droplets. The dog displayed normal activity levels and alertness, with a normal body temperature. Frequent licking of the vaginal region was observed. The vaginal size was approximately double that of a spayed dog. A urine sample was collected for analysis to rule out urinary infection, which yielded negative results. No signs of trauma or tumours were detected upon physical examination.

Methods

Exploratory vaginal cytology was performed and revealed the presence of superficial and cornified cells. Abdominal ultrasonography confirmed the presence of ovarian tissue. Additionally, serum progesterone levels were evaluated and found to be 3.5 nm mg, significantly higher than the expected 0.2 nm mg in a sterilized dog.

Treatment

An exploratory laparotomy was performed after a two-week interval. The dog was sedated with xylazine (2 mg/kg), buprenorphine

(0.02 mg/kg), and ketamine (5 mg/kg), followed by induction with diazepam (0.2 mg/kg) and propofol (0.1 mg/kg). Anaesthesia was maintained using propofol. The laparotomy incision was made proximal to one-third of the distance between the xiphoid and pubis. A two-centimeter mass was found on the caudoventral margin of the left kidney, which was ligated and dissected using Pgs (2-0) sutures. The right ovary was examined, and no remnants were found. The laparoscopic incision was closed with monofilament suture material (pds 1-0).

Discussion

Remnant ovarian syndrome (ROS) is characterized by the presence of functional ovarian tissue in spayed female dogs or cats. Clinical signs of ROS include swelling of the vulval region, behavioural changes, and bloody genital discharge [1]. Initial investigations involve vaginal cytology to detect cornified cells [2]. Hormonal assays, including LH and Progesterone, can also be conducted. In spayed dogs, Progesterone levels are expected to be consistently below 0.2 ng/ml, making it an unreliable indicator of estrous cycles [1].

ROS can occur due to inadequate visualization during ovariohysterectomy, revascularization of ovarian remnants in the abdomen, and improper clamping and dissection of the ovarian pedicle [3].

Successful ROS surgeries require complete abdominal visualization and are best performed 2 to 4 weeks after the animal's heat cycle. Progesterone should be measured when signs of estrous are present or within 50 to 80 days afterward, with levels above 2 ng/mL indicating functional corpora lutea.

Confirmation of ROS diagnosis requires exploratory laparotomy and histological confirmation through ovarian structure biopsy. Complications of ROS include stump cell pyometra, mammary cell neoplasia, and granulosa cell tumors [4]. ROS is an iatrogenic condition that can be prevented with careful ovariohysterectomy.

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