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Abhishek Rajput

Department of Veterinary
Anatomy, College of Veterinary
Science & Animal Husbandary,
Bilaspur, Chhattisgarh, India

Abshar Alam

Department of Veterinary
Anatomy, College of Veterinary
Science & Animal Husbandary,
Bilaspur, Chhattisgarh, India

Kashish Afreen Alam

Department of Veterinary
Anatomy, College of Veterinary
Science & Animal Husbandary,
Bilaspur, Chhattisgarh, India

SP Ingole

Department of Veterinary
Anatomy, College of Veterinary
Science & Animal Husbandary,
Bilaspur, Chhattisgarh, India

Durga Chaurasia

Department of Veterinary
Anatomy, College of Veterinary
Science & Animal Husbandary,
Bilaspur, Chhattisgarh, India

Shivesh Kumar Deshmukh

Department of Veterinary
Anatomy, College of Veterinary
Science & Animal Husbandary,
Bilaspur, Chhattisgarh, India

Corresponding Author:

Abhishek Rajput

Department of Veterinary
Anatomy, College of Veterinary
Science & Animal Husbandary,
Bilaspur, Chhattisgarh, India

Clinical management of Canine Transmissible Venereal Tumour (CTVT) in a Labrador female

Abhishek Rajput, Abshar Alam, Kashish Afreen Alam, SP Ingole, Durga Chaurasia and Shivesh Kumar Deshmukh

Abstract

Canine Transmissible Venereal Tumor (CTVT) is a common neoplasm affecting the external genitalia of dogs, primarily transmitted through sexual contact. This case study presents a 2-year-old Labrador bitch diagnosed with CTVT following mating with a stray dog. The clinical signs included persistent hemorrhagic discharge and a tumor-like structure protruding from the vaginal opening. Treatment involved administering vincristine sulphate intravenously, which resulted in a significant reduction of the tumor and cessation of the discharge. This case highlights the effectiveness of vincristine as a therapeutic option for CTVT, emphasizing the need for further research on its long-term effects on fertility and reproductive health in affected dogs.

Keywords: Canine Transmissible Venereal Tumor, CTVT, vincristine, treatment, hemorrhagic discharge, neoplasm, reproductive health

Introduction

Canine Transmissible Venereal Tumor (CTVT) is a frequent benign reticuloendothelial tumor of dogs that affects both sexes. Tumors are caused by an excessive and disorderly proliferation of cells that serve no purpose, Abeka YT, (2019) [1]. It is a prevalent cause of dog death. Canine transmissible venereal tumor (CTVT) mostly affects the external genitalia and is spread from animal to animal by sexual contact, but it can also be transmitted when the dog bites, sniffs, or licks the tumor-affected areas. It is the only known naturally occurring tumor that may be transferred as an allograft across MHC barriers within the same species, as well as to other members of the canine family such as foxes, coyotes, and wolves Bloom, *et al.* (1951) [5]. The tumor is most commonly found in young, sexually active dogs from a high concentration of free-roaming canines with uncontrolled reproduction. This tumor's progression is distinct in that it follows a predictable growth pattern Das *et al* (2000). Friable nodules in the genitalia, accompanied by hemorrhagic discharge, are clinical indications of this condition, Purohit GN, (2009) [3]. Cytological and histological findings provide the definitive diagnosis. It is frequently self-limiting. Chemotherapy, surgery, radiation, and immunotherapy may be utilized as treatments. Chemotherapy is the greatest option for cancer patients.

History and Observations

A Labrador bitch of 2 years and body weight of 18.5kg was presented with the history of mating on second oestrous cycle with stray dog. As a result, bitch whelped 3 healthy puppies. After 2 months female is having continues haemorrhagic discharge and bulged out tumour like structure from vaginal opening and incomplete loss of appetite.

Treatment and Discussion

Case was diagnosed for Canine Transmissible Venereal tumour (CTVT) according to history and clinical signs. The bitch was treated with vincristine sulphate @ 0.02 mg/kg b.w.t slow IV along with normal saline (250 ml) IV on two occasions at interval of 1 week. For supportive therapy, Inj tribivet (1ml I/M) was administered, and advised pet owner to give healthy and proteinaceous diet and keep supervision on the diet of the animal. Since this therapy sometimes reduces the appetite of the animal and increases shedding of hairs.

After few days haemorrhagic discharge stops and the bulged-out tumour reduced.



Fig 1: Canine Transmissible Venereal tumour (CTVT) before treatment



Fig 2 & 3: Recovery after treatment.

Summary

CTVT is the most prevalent neoplastic disease of the external genitalia of the dog in tropical and sub-tropical regions. The aetiology of CTVT is clearly due to cell transplant from affected dogs. Clinical cases are mostly presented with the owner's mostly complaining with haemorrhagic discharge. Diagnosis is based on physical and cytological findings. Weekly IV vincristine injection has proved to be the most effective and practical therapy. Further experimental studies are necessary to investigate the changes in patency of the reproductive tract during vincristine treatment and its long-term effects on fertility. Until sufficient information on fertility effects becomes available, clinicians and owners must balance the potential benefits to the patient. Immune modulation or immune therapy is yet to be validated before it becomes clinically available.

Conclusion

CTVT remains a significant health concern in dogs, particularly in tropical and subtropical regions. The case of the treated Labrador bitch demonstrates that vincristine sulfate is an effective chemotherapy option for managing this tumor, leading to a reduction in tumor size and resolution of clinical symptoms. While the treatment shows promise, further studies are essential to understand the long-term implications of vincristine on reproductive health and fertility in affected dogs. Clinicians must weigh the benefits of treatment against potential side effects, ensuring that pet owners are informed about the management of CTVT and its impact on their pets' overall well-being

Conflict of Interest

Not available

Financial Support

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