

Successful Therapeutic Management of Transmissible Venereal Tumour in a Female Dog

Dr.Litty Elizabeth Louis¹, Dr.Geethanjali.P.V²

¹ Undergraduate scholar, College of Veterinary and Animal Sciences, Pookode, Wayanad

² Undergraduate scholar, College of Veterinary and Animal Sciences, Pookode, Wayanad

DOI:10.5281/Vettoday.14046148

Abstract

Transmissible venereal tumor (TVT) is a type of cancer in dogs typically spread through direct contact with the tumor during mating. A female dog was presented with a complaint of vaginal bleeding for one week. Based on general examination and laboratory investigation findings the case was diagnosed as transmissible venereal tumour. Chemotherapy using Vincristine sulphate was administered and the animal was successfully recovered and no recurrence was noticed.

Key words

Transmissible venereal tumor, dog

Introduction

Transmissible Venereal Tumours (TVT) are malignant tumours that are unique in their ability to spread between dogs. Unlike other cancers, TVTs are transmitted sexually



through direct skin-to-skin contact with the tumour, resulting in the transfer of cancer cells from one dog to another dog. Dogs with this tumour develop painful masses that protrude out through penis and vagina. It can also manifest on the nose, mouth, eyes, or skin if a

dog sniffs or licks the tumor of another infected dog. Suspicion of the tumour arises from the animal's medical history, mass's location on the body and its physical characteristics. As a part of confirmatory diagnosis cytology, biopsy and histopathology are usually taken. Treatment strategies involve radiation therapy, chemotherapy or surgical excision of the protruding mass.

History

A 3-year-old non-descript female dog weighing 30 kg was presented with a complaint of vaginal bleeding for one week. Normal food and water intake, but straining while urination was reported. Animal was not tightly kept indoors and breeding was not yet done till date. Animal has an improper vaccination and deworming record.



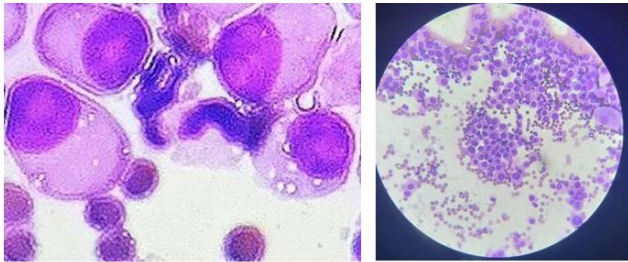
Clinical signs

Clinical parameters were found to be normal. On examination of external genitalia congested vulval mucus membrane, oedematous vulval lips and blood-tinged foetid discharge from vagina noticed.

Diagnosis

On palpation cauliflower like growth noticed at the posterior vagina. Exfoliative vaginal cytology was performed with Field staining. Cells with cytoplasmic vacuoles with

eccentric nucleus noticed. High nucleus:cytoplasmic ratio noticed. On haematological examination leucocytosis was observed. On serum biochemistry, elevated levels of total protein, albumin and calcium also noticed.



BLOOD PARAMETERS

MODULES	RESULT	NORMAL VALUES
Hb (g/dl)	12.6	12-19
PCV (%)	40	37-57
RBC (x10 ⁶ /ul)	6.4	5-9
WBC (x10³/ul)	113.8	5-15
Neu(/ul)	75	60-75
Lym(/ul)	20	18-21
Mon(/ul)	5	2-10
Eos(/ul)	-	0-9
Platelet (x10 ³ /ul)	240	116-510

BIOCHEMISTRY- SERUM

PARAMETERS	RESULT	NORMAL PARAMETERS
Total protein	7.8 g/dl	5.4-7.1
Albumin	3.5 g/dl	2.3-3.3
ALT	25 IU/L	10-109
BUN	28 mg/dl	8-28
Creatinine	1.7 mg/dl	0.5-1.8
Calcium	13.2 mg/dl	9-11.7
Glucose	75 mg/dl	65-118
Potassium	3.6 mEq/L	3.9-5.1

Treatment

The animal was administered with inj.Amoxicillin sulbactam @12.5 mg/kg b.wt i/v, inj.Pantoprazole @1mg/kg b.wt i/v, inj.Vincristine sulphate @0.025 mg/kg b.wt slow strict i/v once weekly for four weeks. Advised to give tab.Clavpet 500 mg @12.5 mg/kg b.wt BID PO for 5 days and tab.Pantoprazole 40 mg @1mg/kg b.wt OD PO before food for 5 days. Animal made an uneventful recovery.



DAY 1



AFTER ONE WEEK

Discussion

Canine transmissible venereal tumor is also known as infectious sarcoma/venereal granuloma/lymphosarcoma/sticker tumour which affects both male and female dogs. In male lesions are mostly observed on penis and in females on vulva. Occasionally this tumour can spread to other organs of body also. Main route of transmission are through coitus, physical contact and licking of affected regions. It can also transmit as an allograft by cell transplantation. A metastatic rate of 5-17% has been reported. Diagnosis is by gross and morphological findings, cytology, PCR etc. VT should be differentiated from mastocytomas, histiocytomas and malignant lymphomas. The main treatment strategies are surgery, radiotherapy, immunotherapy, and chemotherapy.

References

1. Adams, e.w.m, carter, l.p. And sapp. W. J (1968): growth and maintenance of the canine venereal tumor in continuous culture. *Cancer res.*, 28:753-757,
2. Gonzalez c.m., griffey s.m., naydan d.k., flores e., cepeda r., cattaneo g. And madewell b.r.(2000). Canine transmissible venereal tumour: a morphological and immunohistochemical study of 11 tumours in growth phase and during regression after chemotherapy. *Journal of comparative pathology*, 122:241-248
3. Gulcubuk a. And gurel a. (2003), dog tumours observed in istanbul between the years of 1995 to 2000. *İstanbul univ vet fak derg*, 19:83-91
4. Bashford, e.f, murray, j.a. cranner, w (1905): comparison between the transmission of an infective granuloma of the dog and carcinoma of the mouse. *Scientific report, imperial cancer research fund*, 2: 33-37