



CHEMOTHERAPEUTIC MANAGEMENT OF CANINE TRANSMISSIBLE VENEREAL TUMOR IN MALE DOG: A CASE REPORT

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ABSTRACT

The transmissible venereal tumor (TVT) affects the vagina and external genitalia of the bitch and the penis and prepuce of the dog. It is the only naturally transplantable tumor. TVT is a serious problem of male dogs led to venereal granuloma. It is a type of benign reticulo endothelial tumor affects the external genitalia. In the present case a male dog of 4 yrs. approximate body weight 12 kg was suffering from preputial bleeding. On clinical examination TVT was confirmed and chemotherapy was started principally with inj. Vincristine and continued for 3 doses at weekly interval along with supportive treatment. The treatment responded excellently and the dog was completely recovered after three doses of inj. Vincristine.

KEY WORDS: TVT, Male dog, Vincristine, TLC, Liver function test.

INTRODUCTION

Transmissible venereal tumor (TVT), also known as infectious sarcoma, venereal granuloma, transmissible lymphosarcoma or sticker tumor is a benign reticulo-endothelial tumor that mainly affects the external genitalia and occasionally the internal genitalia. Canine transmissible venereal tumor (CTVT) is a contagious venereal tumor of dogs, commonly observed in dogs that are in close contact with one another, or in stray and wild dogs that exhibit unrestrained sexual activity. CTVT represents a unique, naturally transmissible, contagious tumor where the mutated tumor cell itself is the causative agent and perpetuates as a parasitic allograft in the host (Ganguly *et al.*, 2016). In the male, the tumor is observed in the penis and prepuce and in females the affected sites are the vulva and vagina (Nak *et al.*, 2005). Case of

Transmissible Venereal Tumor in male dog was therapeutically managed and was placed on record.

Case History and Observations

A four year old and approximately 12 kg male dog with unknown mating record was presented for treatment in Teaching Veterinary Clinical Complex, Veterinary College, Mhow, from the Mhow city with the history of bleeding from preputial cavity since last 15 days. The dog was dull, depressed, and running temperature of animal was recorded as 102.1°F. Clinical examination revealed the presence of granulomatous, cauliflower like growth at the base of penis with secondary inflammation and edematous swelling. Respiration and pulse rate were within the normal range.



FIG. 1 Granulomatous growth at base of penis



FIG. 2 Penis with complete recovery

CLINICAL MANAGEMENT AND DISCUSSION

Dog was restrained in right lateral recumbency with the aseptic precaution the penis of dog was protruded out from the preputial cavity upto its base and aseptically cleaned with betadine solution. After thorough aseptic cleaning dog was principally treated with Inj. Vincristine sulphate 0.3 ml (@ 0.025 mg/kg bwt.) slow i/v along with 100 ml Normal Saline, as the supportive therapy; Inj. Ceftriaxone 250 mg i/v, Inj. B-Complex 1 ml i/v and Syrup Liver tonic 5 ml orally twice a day was advised. Therapy continued for 3 doses at 7 days interval.

2 ml blood sample was collected from dog at all 3 consecutive therapeutic days and subjected for total leukocyte count (TLC) and liver function tests alanine aminotransferase and aspartate aminotransferase (ALT & AST) to see the adverse effect of vincristine on blood leukocytes and liver functions.

The dog responded excellent and recovered uneventfully following the treatment. Granulomatous growth reduced to normal without further preputial bleeding. The blood profile revealed that the TLC before treatment was 16,200 per dl of blood and after treatment were 16,800 per dl of blood. ALT concentration before treatment was 98.9 µl and 74.3 µl after treatment. AST concentration before treatment was 52.3 µl and 57.5 µl after treatment.

The TVT is a cancer that affects mainly stray dogs, mixed breed, with a mean age of three to eight years, i.e. at their active sexual cycle, being intercourse is the main form of transmission. The tumor is often found in the genital regions (Stockmann *et al.*, 2011). TVT is the most prevalent neoplasia of the external genitalia of the dog in tropical and sub-tropical areas. The most frequent owner's complaint is the hemorrhagic discharge from preputial cavity is an emergency condition and should be treated as soon as diagnosed otherwise it will lead to unfavorable prognosis. Several treatments including surgery, radiotherapy, immunotherapy, biotherapy and

chemotherapy have been applied for TVT. Calvet *et al.* (1982) reported that chemotherapy has been shown to be the most effective and practical therapy and vincristine sulphate being the most frequently used drug. The patient in the present case recovered with ameliorated therapeutic response was probably due to the excellent and practical chemotherapeutic effect of vincristine sulphate on granulomatous tumor with slight variation in the liver functions.

ACKNOWLEDGEMENT

We thanks to the head and whole faculty of department of Veterinary Gynaecology and Obstetrics, College of veterinary science & A.H., Mhow for providing necessary facilities for the study.

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