

THERAPEUTIC MANAGEMENT OF TRANSMISSIBLE VENEREAL TUMOR IN A BITCH: A CASE REPORT

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Abstract: Current case report describes the success full treatment of transmissible venereal tumor or venereal granuloma in a non described (4 year) bitch presented to department of VCC, PGIVER, Jaipur. Treatment with anticancer drug vincrystine sulfate @ 0.025mg/Kg Body weight resulted in complete regression of protruding mass within one week of treatment. Supportive therapy with livertonc also done to combat side effects of the drug.

Keywords: TVT, Vincrystine Sulfate.

Introduction

Transmissible venereal tumor (TVT), popularly known as infectious sarcoma, venereal granuloma, transmissible lymphosarcoma or Sticker tumor, is a benign reticuloendothelial tumor of the dog that is well known to affects the external genitalia but occasionally the internal. The main mode of transfer is usually coitus (Calvet, 1983) during which allogenic cellular transplants (Richardson, 1981) & abnormal cells transplanted onto genital mucosa, and occasionally onto nasal or oral mucosa due to licking of affected genitalia (Cohen, 1985; Johnston, 1991). Initially small superficial dermoepidermal nodules (1 mm to 3 mm diameter) are observed that successevly convert in to pedunculatetd mass after 2 or 3 weeks of transplantation. Then, multiple nodules fuse together forming larger, red, hemorrhagic, cauliflower-like, friable masses. These masses are friable that bleed easily and while becoming larger, normally ulcerate and become contaminated (Aprea et al., 1981). TVT has continued to be a serious problem around the world occurring at same frequencies in both male and female dogs. In India TVT is known to be the most frequently reported tumor in dogs ranging from 23-43 % of the total number of tumors in canine population (Gandotra et al., 1993). Uncontrolled sexual behavior and a large stray dog population appear to be one

reason for such a high incidence of TVT. An age related incidence has been shown for TVT with the tumor being common at 2-5 years of age. Metastasis of TVT is uncommon, only occurring in puppies and immuno-compromised dogs. The uniqueness of TVT lies in the fact that this is the only proven example of a naturally occurring tumor that is transmitted as an allograft by cell transplantation, and the tumor becomes autonomous from the original host.

Case Description

A non described bitch at age of 4 year was presented to VCC, PGIVER, Jaipur with the history of a red protruding mass from vagina since two month with occasional bleeding. On clinical observation the animal was alert and having normal temperature. On per vaginal examination it was found that multiple nodules fuse together forming larger, red, hemorrhagic, cauliflower-like, friable masses that were bled easily on manipulation (Figure 1). on the basis of clinical sign and previous history of breeding with street dog the case was diagnosed as Transmissible venereal tumor and treatment was started with anticancer drug Inj. vincristine sulphate @ 0.025 mg/kg bwt, IV (Onvinc, Neon Laboratories Ltd) with 300 ml of normal saline on weekly interval for four successive weeks. For control of bleeding Inj Trexanemic acid @ 8mg/kg bwt IM was given on each administration of drug. Consicutely owner was also informed about side effects of vincristine sulphate like alopecia, rough coat, vomition, reduced appetite etc. On one week after first shot of treatment, protruding tumor mass show complete regression with no adverse effect on appetite and change in behaviour (Figure 2). To prevent recurrence treatment was also continued for another three weeks.

Discussion

TVT is considered as immunogenic tumor in which host immune system play an important role in inhibiting tumor growth and metastasis and restricted its occurrences largely only in puppies and immunocompromized dogs. Several treatments including surgery, radiotherapy, immunotherapy, biotherapy and chemotherapy have been attempted for treatment of TVT. But only chemotherapy has been shown to be the most effective and practical therapy, with vincristine sulfate being the most frequently used drug (Calvet et al., 1982). Vincristine is administered weekly at a dose of 0.5 to 0.7 mg/m² of body surface area or 0.025 mg/kg, IV (Cohen., 1985; Johnson., 1994). Complete remission usually takes 2 to 8 injections (Daleck et al., 1987; Calvet et al., 1982) and occurs in more than 90% of the treated cases that is also seen in current case. A cure rate approaching 100% is achieved in cases treated in the initial stages of progression, especially in cases of less than 1 year duration, and independent of the

presence or not of metastases (Boscos et al., 2004). In cases of longer duration, longer periods of therapy are required, and the cure rate is lower (Boscos et al., 2004). Side effects can be expected in longer therapy in form of myelosuppression and gastrointestinal effects resulting in leucopenia and vomiting in 5 to 7% of the patients. Paresis has also been described as a side effect due to peripheral neuropathy (Calvet et al., 1982; Withrow and McEwen, 1996). A complete white blood cell count is, therefore, recommended prior to each administration. When the white blood cell count is below 4,000 mm³ further administration should be delayed 3 to 4 days and the dose of vincristine can be reduced to 25% of the initial dose (Calvet et al., 1983).

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Figure 1 -Red, haemorrhagic mass protruding from vulva

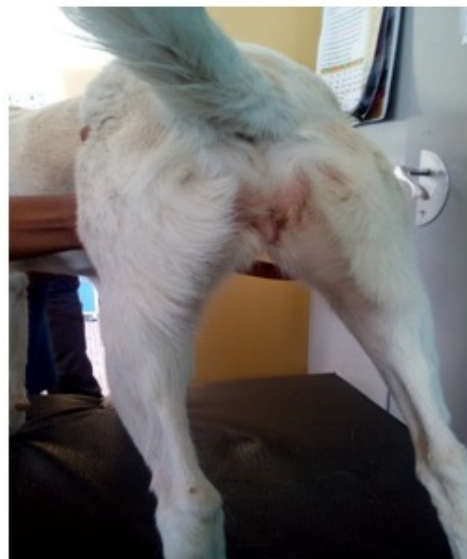


Figure 2 - Complete regression of mass after treatment