The Indian Journal of Animal Reproduction; 23(1): 71-72; June 2002,

Short communication

Clinical observations in TVT affected dogs treated with Vincristine sulphate*

ANITA JAIN[1], R.P. TIWARI[2], S.K. TIWARI[3] AND M.K. AWASTHI[4]

Department of Obstetrics and Gynaecology
College of Veterinary Science and Animal Husbandry, Anjora, P.B.No. 6, Durg (C.G.)

Received : March 23, 2000
Accepted : April 20, 2002

ABSTRACT

Six healthy and six TVT affected dogs were treated with Vincristine sulphate @ 0.025 mg / kg body wt, I/V at weekly interval for 5 weeks while 6 TVT affected dogs were surgically operated and after one week they were treated with vincristine sulphate at same dose rate and interval for three weeks at weekly interval. Five (83.33%) animals recovered completely between two to five weeks period while one dog that was having extragenital metastasis did not recover in vincristine sulphate treated group. All the dogs (6/6) recovered completely without recurrence with surgical excision of tumour followed by vincristine sulphate administration. Side effects of vincristine sulphate injection included vomition, constipation, anorexia and alopecia. There was significant rise of body temperature ($P<0.01$) with nonsignificant increase in pulse and respiration rate following administration of vincristine sulphate. However, these side effects were transient and well tolerated by the treated animals.

Key words: Canine Transmissible Venereal Tumour (CTVT), vincristine sulphate

Canine transmissible venereal tumour (TVT) is most common neoplasm of dogs in India (Phangcho *et.al.* 1990) which usually affects the external genitalia of either sex. TVT has been treated with various types of chemotherapeutic agents with varying results. Present study deals with the effects of vincristine sulphate on clinical parameters in TVT affected dogs.

Six healthy and 12 TVT affected dogs were selected to conduct the present investigation .All the animals were divided into two groups. Group I comprised of 6 healthy and 6 TVT affected dogs and they were treated with vincristine sulphate @ 0.025 mg/ kg body wt I/V at weekly interval for five weeks. Group II comprised of 6 TVT affected dogs and they were operated surgically to excise the tomour mass and later treated with Vincristine sulphate @ 0.025 mg/ kg body wt I/V at weekly interval for 3 weeks, one week after surgical operation. Clinical observations were made on day 0, 3, 7, 14 and 21 after beginning of vincristine sulphate for temperature, pulse and respiration rate in the animals of both groups. Observations were also made on regression of tumour mass, type of growth, discharge from external genitalia and side effects of vincristine therapy.

Common clinical symptoms observed were serosanguinous and haemorrhagic genital discharge in all the affected animals except in two in which non secretary types of growth was present. Similar symptoms have been observed by Brown *et.al.* (1980), Chauhan *et.al.* (1991) and Hoque *et.al.* (1995). However, two dogs had nonsecretary types of growth which might be due to initial stage of tumour growth. Genital discharges from all the affected dogs were stopped 2 to 4 days after treatment. Similar observations have been recorded by Das *et.al.* (1991), Dinesh *et.al.* (1993) and Singh *et.al.* (1997). Simple polypoid growth with a pedunculated or broad based lumpy granulomatous or multilobulated mass or cauliflower like growth in the fornix of the vagina in females and on the glans penis and at the base of penis in males were observed. These findings simulated with the reports of Brown *et.al.* (1980) Nayak *et.al.* (1987) and Dinesh *et.al.* (1993).

* Part of MVSc thesis submitted by first author to IGKV, Raipur (C.G.)

[1]Veterinary Assistant Surgeon, Dondilohara, Durg (C.G.), Corresponding author-[2]Assoc. Professor; [3]I/C, Department of Surgery and Radiology; [4]Asstt. Professor

Significant (P<0.01) rise in body temperature and nonsignificant increase in pulse and respiration rates were observed after 30 minutes of Vincristine sulphate administration. Common side effects included anorexia vomition constipation and alopecia, which were observed 24 to 48 hours after Vincristine sulphate treatment. These observations are in agreement with the findings of Dinesh *et.al.* (1993), Sing *et.al.* (1997) and Padile *et.al.* (1998). However, Daleck *et.al.* (1987), Bandopadhyay and Das (1993) and Maiti *et.al.* (1995) reported no side effects of Vincristine sulphate therapy. The toxicity of antineoplastic drug like Vincristine sulphate is generally related to myelosuppression effects (Madewell 1981), gastrointestinal disorders, delayed hair growth and alopecia (Deborah and Cheryl, 1990) by treated animals.

Five dogs (83.33%) recovered completely out of six animals treated with Vincristine sulphate while one dog with extragenital metastasis did not recover. Cent percent recovery was observed in surgically operated dogs and later treated with vincristine sulphate. No recurrence was noticed upto 92 days after treatment. It might be due to complete ablation of TVT tissues, removed by surgical operation followed by Vincristine sulphate therapy. These findings approximate with reports of Pandey *et.al.* (1989) and Tiwari *et. al.* (1991).

Prompt reduction in the size of tumour were recorded with vincristine sulphate. The reduction of growth started rapidly after first injection and on 7th day remarkable regression of growth was noticed. Afterwards comparatively slow regression of tumour was observed. Almost complete recovery was observed upto 92 days after beginning of treatment in both the groups except in one dog of group I which had extragenital metastasis.

Therefore based on above study it can be concluded that vincristine therapy or surgical excision followed by vincristine therapy should be choice of treatment for nonmetastatic TVT in canines as vincristine sulphate produced very mild side effects which were well tolerated by treated dogs.

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