

CLINICAL DIAGNOSIS AND THERAPEUTIC MANAGEMENT OF TRANSMISSIBLE VENEREAL TUMOR IN CANINES

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[Received: 03.11.2018; Accepted: 07.5.2019]

{DOI 10.29005/IJCP.2019.11.1.053-055}

A total number of 24 cases of canine from both the sexes in the period of one year were suspected for transmissible venereal tumor (TVT) which reported in Teaching Veterinary Clinical Complex, Nagpur Veterinary College, Nagpur. Out of 24 dogs, 12 male and 12 females were recorded. Male and female had complaint with continuous prepuccial and vaginal bleeding since one week or more than a week respectively. In males, prepuccial exposure and impression smear was collected. Whereas in females with posterior vaginal tumor impression smear was collected and anterior type of tumor was diagnosed by vaginal cytology. Smear picture showed round to slightly polyhedral cells of TVT. A total 12 cases were treated with Inj. Vincristine @ 0.025mg/kg slow I/V in DNS and 12 cases were treated with autohaemotherapy @ 10 ml whole blood I/M for once in week and continued upto its complete regression. Recovery was noticed, faster by use of inj. Vincristine than autohaemotherapy. Side effects were observed only in Vincristine treated dogs. It can be concluded that impression smear of tumor growth is better method to diagnose TVT. Autohaemotherapy is safest treatment for TVT in dogs.

Keywords: Autohaemotherapy, Dog, TVT, Vincristine Sulphate.

Transmissible venereal tumor is a tumor of the canines that mainly affects the external genitalia because of its nature of sexual transmission. It is mainly transmitted from animal to animal through sexual intercourse with affected animal and may also be passed on as the dog bites, sniffs or licks the tumor affected areas (Das, *et al.* 1989). CTVT appears as a cauliflower like growth on external genitalia and may sometimes show discharge and bleeding from vaginal canal. In bitches, it was found full of granulomatous tissue with growth on uteri. It has been observed that tumor have been found in sexually active mature dogs. Bitches are more susceptible than male with more concentration of free roaming dogs with uncontrolled reproduction (Gandotra *et al.* 1993). In bitches, the tumor occurs in area of vulva, vagina and os uteri. In immune-suppressed bitches, the tumor is spread in cancerous manner. Treatment of affected TVT dogs is beneficial than surgery. Vincristine sulfate has long been demonstrated to be effective as a single chemotherapeutic agent.

Major advantages of treating bitches for TVT with Vincristine sulphate are its high cure rate, fast recovery and usefulness in

retarding metastasis. But its side effects includes inappetance or partial inappetance, vomition, diarrhoea, neutropenia and alopecia in some dogs. Autohaemotherapy in TVT cases has been successfully treated in experimental animals.

Hence, the present paper is studied based on clinical diagnosis and therapeutic management of transmissible venereal tumor in canines.

Materials and Methods

A total of 24 dogs of both the sexes in the period of one year (January 2017 to January 2018) were suspected for transmissible venereal tumor which reported in Teaching Veterinary Clinical Complex, Nagpur Veterinary College, Nagpur. Out of all reported dogs, 12 male and 12 females were registered under the treatment protocols. Male and female were divided in groups viz. Group I (n=6) and II (n=6) for Male dogs while Group III (n=6) and Group IV (n=6) for female dogs respectively. All dogs were selected on the basis of their complaint with continuous prepuccial and vaginal bleeding since one week or more than a week respectively. Per vaginal examination revealed that soft growth in the vaginal passage, easy to bleed, closed cervix in

female whereas in male, cauliflower like growth observed on glans penis. Restlessness, anorexia, reduced water intake, health status reduced, licking at genitalia was also been observed.

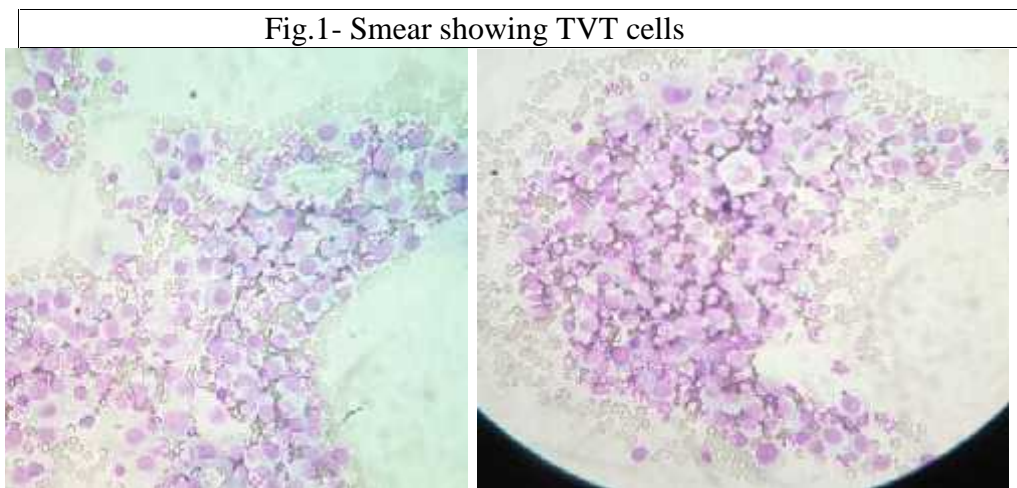
Group I and III were treated with Inj. Vincristine sulphate @ 0.025mg/kg BW by slow I/V route in normal DNS at weekly interval for five consecutive weeks, Group II and IV were treated with autohaemotherapy (10 ml whole blood Intramuscular in gluteal muscles) for seven weeks.

In males, impression smear was taken on the affected area after exposing the affected area on clean sterilized glass slide from each case and stained with Leishman's. In females, whose tumor growth was on

posterior vagina were also diagnose with impression smear while those tumor growth was in anterior region, samples were collected by use of sterilized swab. In such method, swab was inserted inside the vagina and deep cells were collected. After that this swab was rolled on sterile slide and stained with Leishman's stain.

Results and Discussion

In the present study, Leishman's stained impression smear diagnosed round to slightly polyhedral cells of TVT and further examined cytologically, it was observed higher degree of cellularity with homogenous, round sheet and individually arranged tumour cells (Fig.1).



Slightly polyhedral cells of TVT, higher degree of cellularity with homogenous, round sheet and individually arranged tumour cells

The present findings are closely agreement with Alleman and Bain (2000) and Thangathurai *et al.* (2008) who have reported the tumour masses which appeared as irregular, cauliflower like and had a tendency to bleed. TVT cells that lack cytoplasmic vacuoles may be easily confused with other round cell tumours. The morphological appearance and location of the tumour however could help in the diagnosis. Mitotic figures in different stages of mitosis were prominent. This indicates the proliferating nature of the tumour cells.

In the present study, in group I and III, complete regression of the tumors within three consecutive treatments with no recurrence of the mass was observed. During

the course of treatment with inj. Vincristine Sulphate, side effects such as vomition, anorexia and alopecia were recorded. In group II and IV, tumor observations found to be complete regression after 45 days of treatment. During the study period, no recurrence was reported in respect of sex. There were no side effects recorded during the autohaemotherapy.

The present observations are in agreement to Das *et al.* (1989), Bal Krishnan (1997) and Khan *et al.* (2009) who treated the cases with Vincristine Sulphate and reported 100 % regression of the tumor. Mechanism of action of Vincristine Sulphate is inhibiting mitosis and bonded with tubulin by preventing the formation of mitotic spindles.

Similar observations was found by Drumond *et al.* (2013) who treated cases with autohaemotherapy and recorded 50% of regression of tumors. Autohaemotherapy can be effective in the influence of immune response of the host favorably in the therapies, since in general it is necessary between 5 to 8 applications of the oncolitico to achieve the total regression of the mass.

It can be concluded that impression smear is a quick, rapid, easy and field diagnostic technique. Autohaemotherapy was found to be a safest treatment of TVT in dogs.

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