were normal and this was contradictory to the reports of Alam and Nasr loc cit. and Abdullah et al., (2013). The elevated urea level was in accordance with finding of Esmaeilnejad et al., (2012).

The clinically affected animal was treated with injection of Diaminacine aceturate @ 3.5 mg/ kg b.wt intramuscularly and 5% dextrose normal saline 1.5 litre/day intravenously for two days. The supportive therapy was given with injection of Ferritas @ 10 ml intramuscularly for five consecutive days. The hemoglobinuria was changed to normal after 48 hours of treatment.

The post treatment haematological examination revealed improvement in haemoglobin (4.0 g/dl), PCV (18 %), RBC count (2.97x10^6/cm3), WBC count (5.2x10^3/cm3), MCV (60.6 fl) and MCH (13.4 pg), except MCHC (22 g/dl) after treatment. Biochemical analysis showed that the urea level was reduced to normal.

**References**


**Transmissible Venereal Tumour in a Castrated Dog – A case report**

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**Abstract**

A three year old male Non-descript dog was presented with the history of bleeding at the beginning and end of urination since two days. Clinical examination of the penile region revealed cauliflower like growth. Cytological examination of the growth confirmed it to be transmissible venereal tumor. Vincristine sulphate was administered weekly @ 0.025 mg/kg, B.wt intravenously for four weeks and the animal made an uneventful recovery.

**Keywords**: Castrated dog, Transmissible venereal tumor

Transmissible venereal tumours are a naturally occurring neoplasm in intact young sexually active free roaming dogs. It is an infectious tumour, spread by mating or by licking at the genitalia of the affected animals (Rogers et al., 1998). The incidence ranges from 2 to 43 per cent of all the tumours and more common in 2-5 years of age. The present paper reports transmissible venereal tumour in a castrated Non-descript dog.

**Case History and Observations**

A three year old male Non-descriptive dog was presented with the history of bleeding at the beginning and end of urination since two days. The owner also reported that the dog was castrated five month back. Physical examination revealed, the preputial orifice was smeared...
with blood and on further handling of the penis through the prepuce, blood started dribbling from the preputial orifice. On complete exteriorization of the penis, multiple friable, cauliflower-like, multilobular growth greater than 15 mm in diameter were observed near bulbous glandis. Microscopical examination of the impression and FNAB smear revealed the presence of numerous large round neoplastic cells with round hyperchromatic nuclei. Binucleate, trinucleate, and multinucleated cells (Fig. 1) were seen. Mitotic figures were also seen. The cytoplasm of the neoplastic cells contained vacuolations. Infiltration of inflammatory cells predominantly neutrophils indicated that the mass was infected and ulcerated. Thorax and abdominal lateral radiography confirmed no metastasis and caliculi. Haematological parameters were within the normal range and negative for blood parasites. Vincristine sulphate was administered weekly @ 0.025 mg/kg B.wt intravenously for four weeks along with the supplementation of Liv 52 (liver supplement) and Dexorange (Haematonic) 5ml each BID and the mass regressed gradually after the first dose itself. Chemotherapy has been shown to be the most effective and practical therapy, with vincristine sulphate being the most frequently used drug and for complete remission usually required 2 to 8 injections (Nak et al., 2005).

**Treatment and Discussion**

It is common to find TVT in sexually active intact male dogs, the finding of TVT in a castrated male dog is very rare and unusual. In the present case, the owner was unaware that the animal had been castrated. It is possible that the male dog presented had an intact testis and was sexually active and had mated with a TVT affected female in the recent past. Subsequently, the animal might have been castrated and as castration has no effect on already implanted TVT cells, the TVT continued to develop and established. Further, a second possibility is that the animal had been castrated long time back, retained its mating behavior and had mated with a TVT affected dog in recent past (Johnston, 1991). He also opined that a male dog may continue to retain its mating behavior, which is a learned experience in spite of castration and continue to attempt mating. Although intromission may occur in a castrated male dog, the erection is incomplete and locking of the bulbus glandis fails to occur. The process of intromission might be sufficient for the castrated male dog to pick up TVT cells. The implantation of the tumor is facilitated by the presence of any mucosal lesion or by the loss of mucosal integrity (Rogers, 1997). The tumour growth appears 15 to 60 days after implantation. TVTs can either grow slowly and unpredictably for years or be invasive and eventually become malignant and metastasize. In the present case, five months after castration only the animal was presented with the complaint of bleeding. TVTs are immunogenic tumors, and it has been demonstrated that the immune system of the host has a main role in inhibiting tumor growth and metastasis (Krouger et al., 1991).

Metastasis is uncommon (5%). When metastasis occurs, it is usually to the regional lymph nodes, but kidney, spleen, eye, brain, pituitary, skin and subcutis, mesenteric lymph nodes, and peritoneum may also be sites (Lakshmikanth et al., 2014). In the present case, Vincristine at weekly doses of 0.025 mg/kg B.wt was administered and the treatment was continued up to four weeks. Complete regression was noticed. Adriamycin(30 mg /m2, IV, once every 3 wk) also has been effective for those animals that do not respond to vincristine (Kisani and Adamu, 2009). The prognosis for total remission
with chemotherapy or radiation therapy is good, unless there is metastatic involvement of organs other than skin. Complete surgical excision often cannot be achieved because of the anatomic location of many of these tumors. Recurrence is likely in such cases unless adjunct radiation or chemotherapy is used. (Johnson, 2005). The dog was constantly monitored for recurrence and till date no recurrence was reported. In the present case, the diagnosis was made early with cytological examination and the animal recovered uneventfully.

References


