SERTOLI CELL TUMOUR IN A GERMAN SHEPHERD DOG

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Testicular tumours are the second most common tumours of male dogs after skin tumours. Sertoli cell tumour is mostly observed in intact, unneutered older male dogs. Cryptorchid males have 13.6 times greater risk of developing sertoli cell tumour than normal males. The right testicle is more often affected than the left. The present report describes the clinical and pathological aspects of sertoli cell tumour in a dog.

A male German Shepherd dog, aged 11 and a half years, was brought to the Department of Clinics, Madras Veterinary College, Chennai with a history of hairless patches all over the body. It was reported to have purulent discharge from prepuce. On clinical examination it revealed bilaterally symmetrical alopecia, hyperpigmentation of the skin and gynaecomastia manifested by enlargement of mammary nipples (Fig.1). Abdominal examination revealed palpable mass, which was confirmed by radiological examination. Pre-operative haematological analysis (Table) showed anaemia and leucocytosis with neutrophilia. Pre-operative biochemical analysis (Table) revealed increased BUN and the serum oestradiol level was 26.59 pg/ml. The cryptorchid testicles were removed surgically. The right testicle was found to be enlarged measuring about 5x2.5 cm. It was firm and cream coloured in appearance. The left testicle was atrophied (Fig. 2). Histopathological picture revealed islands of neoplastic cells separated by fibrous tissue stroma. The cells had palisade arrangement

Fig. 1: German Shepherd dog, Sertoli cell tumour: Note alopecia and hyperpigmentation of skin and gynaecomastia with enlarged nipples.

Fig. 2: German Shepherd dog, testicles: Right: Sertoli cell tumour; Left: Atrophic.

Fig. 3: German Shepherd dog, Sertoli cell tumour: Palisading arrangement of neoplastic cells. HE X 400.

Fig. 4: German Shepherd dog, Sertoli cell tumour: Regrowth of hair and regression of gynaecomastia after removal of the affected testicle.
show regression of feminisation syndrome viz.,
gynaecomastia, sexual attraction for other males etc. as
it has been noted that dogs which develop
hyperestrogenism from sertoli cell tumours often have
regression of symptoms, once the tumour has been
removed. The dog also suffered from anaemia as a result
of severe hyperestrogenism, which generally resulted in
anemia, and sometimes the animal might require
transfusion or proper treatment2,5. Alopecia and
feminisation syndrome due to presumed oestrogen
activity was observed in 20% to 50% of the sertoli cell
tumour cases especially if the tumorous mass was large
and retained2. Hypoplastic anaemia succeeded by
pancytopenia was attributed to the toxic effect of high
oestrogen levels. Dogs that are cryptorchid should not
be used for breeding as it increases the chance by 13
times for testicles to develop a tumour. Furthermore,
testicular tumours can be easily prevented through
routine neutering of male dogs1.

**REFERENCES**
   Malignant seminoma with systemic metastasis in a dog.
   305-307.

| Table: Pre-operative and post-operative haematological and biochemical values in sertoli cell tumour in a dog |
|---|---|---|
| Parameters | Pre-operative | Post-operative |
| | 7.6.04 | 26.10.04 | 22.1.05 |
| PCV (%) | 30 | 22 | 31 |
| Hb g (%) | 9 | 8 | 10 |
| RBC (m/cmm) | 4.42 | 4.2 | 5.07 |
| WBC (cells/cm) | 27000 | 36000 | 9800 |
| Neutrophil (%) | 91 | 68 | 68 |
| Lymphocyte (%) | 9 | 21 | 20 |
| Monocyte (%) | - | 7 | 2 |
| Eosinophil (%) | - | 4 | 10 |
| Bun (mg/dl) | - | 88.9 | 36.8 |
| Creatinine (mg/dl) | - | 1.6 | 1.1 |
| Calcium (mg/dl) | - | - | 10 |
| Phosphorus (mg/dl) | - | - | 4.8 |
| Alkaline phosphatase | - | - | 59.73 |
| (K.A.U.) | | | |
| Oestradiol (pg/ml) | - | 26.59 | Not detectable |

In the present case, there was dramatic subsiding of
skin lesions like alopecia and the animal was found to
suggesting it to be sertoli cell tumour (Fig. 3). Review
after 2 months showed a dramatic change with regrowth
of hairs all over the body, disappearance of
hyperpigmentation of the skin and absence of
hypermastasia (Fig.4). Haematological and biochemical
values including serum calcium, phosphorus and
alkaline phosphatase were within normal range. Serum
oestradiol level was not detectable.

The table below shows the pre-operative and post-operative haematological and biochemical values in a dog with Sertoli cell tumour:

<table>
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