

## OCULAR SQUAMOUS CELL CARCINOMA AND ITS MANAGEMENT IN TWO DOGS- A CASE REPORT

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### SUMMARY

Two male dogs aged 1.5 years were brought with the history of growth in both eyes. The abnormal growth started developing one month earlier in right eye and multiple nodules ranging from 8 to 12 mm in diameter were observed all over the back, neck and in both eyes. Based on histopathology both cases were diagnosed as of ocular squamous cell carcinoma. Both the dogs were treated with vincristine @ 0.025 mg/kg body wt., dexamethasone @ 1 mg/kg body wt., inj. B complex 1ml via the intravenous route. Two doses of vincristine were given at weekly interval. Both the dogs responded to the treatment and recovered successfully.

**Key words:** Ocular squamous cell carcinoma, dogs, chemotherapy

Eye is an organ of vision which can develop abnormal growth in many of their anatomical components. Abnormal growths, whether benign or malignant, can have a devastating consequence on the animal's vision and can become life-threatening if they begin to invade the central nervous system. The earlier the eye tumors are detected, the higher will be the probability of recovery in terms of saving the vision (Stephen and Vail, 2007). Less common tumors include squamous cell carcinoma, melanoma, histiocytoma, mast cell tumor, and basal cell tumor and the most common tumours are osteosarcoma, lymphoma, mammary sarcoma, melanoma and hemangiosarcoma. Squamous cell carcinomas (SCCs) are either slightly raised masses or ulcerated areas of thickened skin. SCCs are usually pink or red in appearance and do not respond to topical medication (Morrison, 1998). Two cases of ocular squamous cell carcinoma in dogs are reported.

Two male dogs of 1.5 years of age and of same genetic line (Littermates) were brought to the clinic with the history of growth in both eyes. The abnormal growth began developing 30 days earlier in right eye (Fig. 1) and multiple nodules ranging from 8 to 12 mm in diameter were observed all over the back, neck and in both eyes. Multiple nodules were collected in 10% buffered formaline for histopathological studies and

the tissue sections were stained with routine Haematoxylin and Eosin stain.

On histopathological examination, proliferating epithelial cells with concentrating layer of keratin forming cell nest were observed (Fig. 2). Both cases, based on histopathology were diagnosed as of ocular squamous cell carcinoma. Both the cases were treated with inj. vincristine @ 0.025 mg/kg body wt., inj. dexamithasone @ 1 mg/kg body wt., inj. B complex 1.0 ml via the intravenous route. The treatment was given as two doses of all the three drugs to both the dogs at weekly interval. Both the dogs showed signs of dullness, depression, anorexia, giddiness and nausea at their first visit to the TVCC that subsided after 15 days of second dose. Inj. vincristine is effective but not as a sole treatment for measurable tumors in dogs and produces undesirable adverse reactions (McCaw *et al.*, 1997). After 1 week of therapy, the size of tumour reduced to its half of original size and recovered successfully after 20th day of treatment. Vision was also clear on day 20 (Fig. 3). The hereditary ocular squamous cell carcinoma is a rare condition in dogs. No further recurrence was reported upto 3 months of followup. Multi-agent chemotherapy has anti-tumour activity in a considerable proportion of dogs with tumours (Gerritsen *et al.*, 1998).

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Fig 1. Multiple tumors in eye before treatment.

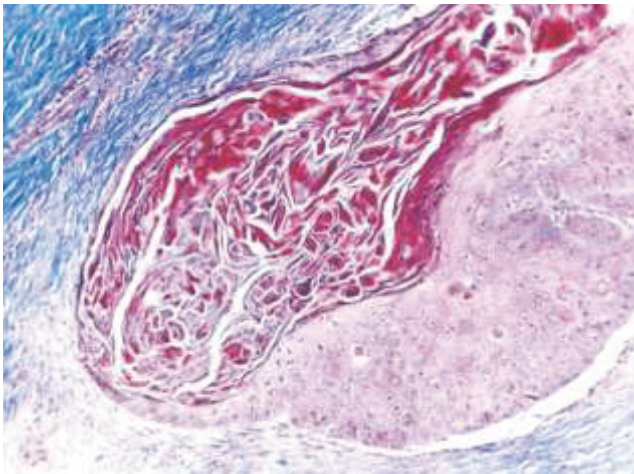


Fig2. Histopathological section of eye SCC showing brick red coloured keratin and intensely blue coloured proliferating connective tissue.



Fig 3. Complete recovery after 20<sup>th</sup> day of treatment.

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