SURGICO-THERAPEUTIC MANAGEMENT OF OCULAR SQUAMOUS CELL CARCINOMA IN A BULLOCK: A CASE REPORT

T. Chandrashekar, J. S. Shruthi, N. G. Amith, M. A. Kshama, J.K. Pramodh and Sushant Handage

Veterinary Dispensary, Somanahalli, Bangalore, Karnataka

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Corresponding Author : chandruchirag@gmail.com

Squamous cell carcinoma of eyeis one of the most common type of skin cancer reported in cattle. It is a very painful fatal disorder which manifests initially as a small nodular growth in the adnexa of eye. Furthur, it represents one of the most economically important neoplasm in large animals and its economic impact is mainly due to carcass condemnation, production losses as well as expenditure of treatment and management. The average age of occurrence of SCC in cattle is 8 years (Cordy, 1990) and the tumours are said to be uncommon in cattle less than 5 years and rare and hardly seen in cattle less than 3 years of age (Rhadostits et al. 2000). Cattle with unpigmented skin around the eye have been reported to be more susceptible to cancer eye.

HISTORY AND CLINICAL EXAMINATION

A 5 year old bullock was presented to the Veterinary Dispensary, Somanahalli, Bengaluru, Karnataka with a history of epiphora from the right eye since a month with decreased working efficiency. On clinical examination, a 2 cm size cauliflower like mass was found originating from the medial canthus of the right eye (Fig. 1). The mass was ulcerated with foul smelling purulent blood tinged discharge. The animal had a temperature of 104 ^{0}F and appeared emaciated due to prolonged anorexia. It was tentatively diagnosed as SCC of the eye and it was decided to excise the mass surgically.

Fig. 1: Bullock showing cauliflower like growth on the right eye originating from medial canthus

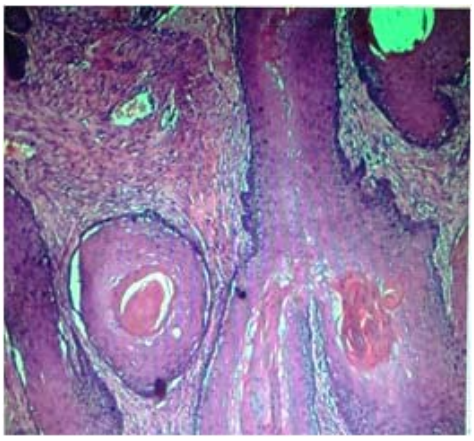

Fig. 2: Laminating keratin pearls and irregular nests of stratified squamous cellindicating SCC.(H&E stain X 100)

Treatment

The animal was sedated with xylazine @ 0.1mg/kg body weight intramuscularly. Retrobulbar and Auriculopalpebral nerve block was performed with 2% lidocaine (Xylocaine®; Astra Zeneca Ltd). A four point retrobulbar block was performed by introducing an 18 gz 9 cm long needle through the skin on dorsal, medial, ventral and lateral aspect of the eye at 12, 3, 6 and 9 'O' clock position respectively and 10 ml of 2% lidocaine was deposited at the site. Auriculo palpebral nerve block

was performed by infiltrating 5 ml of 2% lidocaine subcutaneously behind the supraorbital process on dorsal aspect of the zygomatic arch. The bulk of the tumour was excised carefully without puncturing the eyeball and the lesion was cauterized using thermocautery. The excised mass was fixed in 10% formalin, sectioned and stained with Hematoxylin and Eosin for histopathological examination.Itrevealed nests of stratified squamous cells with keratin pearls suggestive of squamous cell carcinoma (Fig. 2) (Vegad and Swamy, 2010). The animal was kept on I/V fluids, antibiotic and analgesic for 7 days post surgery. No evidence of recurrence of tumor was observed upto 2 months post-operatively. .

DISCUSSION

Exposure to intense solar radiation has been proposed to be one of the primary causes for the development of eye cancer especially when cattle are kept at high altitude in sunny and warm climate (Rhadostits et al. 2000). Areas at higher altitude and longer hours of sunlight have higher incidence of eye cancer (Roberts, 1996). Third eyelid is the most common sites of origin of the cancer. Non pigmented skin, light brown pigment of the iris, hot iron branding, high nutritional status and heriditory factors are known to be associated with SCC (Anderson and Badzioch, 1991). SCC has usually been observed to manifest on the unpigmented skin and then gradually invade other pigmented tissues (Cordy, 1990). It has been suggested that melanin plays a photo protective role in epidermal and mucosal surface which probably accounts for unpigmented cattle being more susceptible. Futher, malignant tendency of the disease makes early recognition critical.

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