

SQUAMOUS CELL CARCINOMA OF EYE IN A SHE BUFFALO

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Ocular squamous cell carcinoma is a common neoplasm of adult cattle, which occur rarely in animals younger than five years old (Moulton, 1990). The most common site of bovine ocular squamous cell carcinoma is the corneoscleral junction (75 %) and the least affected site is third eyelid (Thomson, 1989). This rarest eye cancer in buffalo was seldom reported (Sastri, 1959). This paper deals with the occurrence of upper eyelid squamous cell carcinoma of a two-year-old she-buffalo.

A two-year-old she-buffalo was brought to the Veterinary College and Research Institute's Hospital, Namakkal with a growth on the conjunctiva of the upper eyelid of left eye.

Fine needle aspiration biopsy was taken, air dried and stained with Leishman-Giemsa combined stain for microscopical examination. Under auriculo-palpebral nerve block and peribulbar block using 2 % Lignocaine hydrochloride the mass was completely excised. The conjunctival wound was closed with 2-0 mersuture by simple interrupted pattern. Temporary torsorrhaphy was performed, after 48 hours, torsorrhaphy sutures were removed and antibiotic eye drop, Ciproflaxacin was instilled once in five hours along with antibiotics (streptopenicillin 2.5 g twice daily for five days) and anti-inflammatory (dexamethasone 20 mg daily for two days) injections parenterily. The animal recovered uneventfully after 7 days.

The removed mass was fixed in 10 % formal-saline, processed and embedded in paraffin. Tissue

sections were cut at 5 m and stained with haematoxylin-eosin for histopathological examination.

The pedunculated mass was protruding from the conjunctiva of the black colour left upper eyelid, which measured three inches in diameter. Yellowish-brown coloured necrotic areas, ulceration and haemorrhages were also observed. The excised mass was hard in consistency and the cut surface showed lobulations.

Fine needle aspirate smear revealed a few individual and more clumps of round to caudate cells with anisokaryosis and a few mitotic figures. Moderate numbers of neutrophils were also observed. Histologically, epithelial cell nests of poorly differentiated polyhedral cells (Fig.) were observed. Intercellular bridges between cells could be noticed. The cells showed vesicular nucleus and eosinophilic cytoplasm, and lacked keratinization. Moderate amount of stroma in between cell nests, mononuclear cellular infiltration (macrophages and a few lymphocytes) and a few mitotic figures were also observed. About 20 % of the cells showed condensation, karyorhexis and karyolysis indicating necrotic areas.

These observations were in accordance with earlier report (Goldschmidt and Hendrick, 2002; Atalay Vural *et al.*, 2006). Epithelial cell nests without keratin pearls indicated the anaplastic type in which keratinization is not a feature (Moulton, 1990). Actinic rays (ultra violet light) induced-viral transformation has been shown as a etiological factor for the eye-

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cancer occurrence (Lytle *et al.*, 1970) which need long latent period and the average age of eye-tumour occurrence in cattle is eight years (Moulton, 1990). Lack of pigmentation of the eyelid is a predisposing factor for the action of actinic rays in cattle like Hereford breed.

Occurrence of eye-cancer in a young, two years old buffalo, which was having sufficiently pigmented eyelid and not worked under actinic rays of sun makes a lacunae for further investigation of involvement of some other etiological agents.

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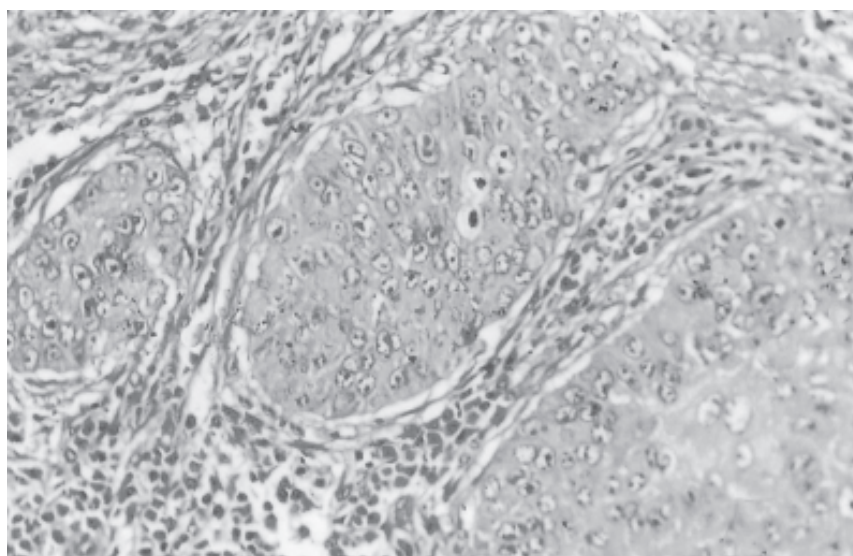


Fig. Variably sized cell nests composed of poorly differentiated squamous epithelial cells without keratin pearls. H & E. 250 X