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Ocular squamous cell carcinoma in a female buffalo: A case report

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Abstract

A five and half year old female murrh buffalo was presented to the Teaching Veterinary Clinical Complex (TVCC), with the history of growth on nictitating membrane of the right eye near medial canthus since one and half month with normal appetite and other clinical parameters. History also revealed that it reoccurs after 6 months again as same growth was excised 6 months before. The neoplastic out growth was resected under lignocaine hydrochloride (2%) with auriculopalpebral nerve block. Histopathology revealed it as squamous cell carcinoma. The animal recovered fruitfully.

Keywords: Buffalo, eye, nerve block, squamous cell carcinoma

Introduction

Squamous cell carcinoma is a tumour of epidermal cells in which the cells show differentiation to keratinocytes. Squamous cell carcinoma is the most commonly occurring neoplasm afflicting the bovine eye [1-3]. The most common areas affected are limbus (junction of the cornea and the sclera), third eyelid, and on the upper and lower eyelid margins primarily at muco-cutaneous junctions [4]. The etiology of the disease is multifactorial. However, prolonged exposure to sunlight (ultraviolet light) also seems to be a driving force for the disease [5]. Distribution of Bovine ocular cell carcinomas between right (40%) and left (37.5%) eyes was approximately equal, while in 21.9% of cows with neoplasms, both eyes were affected [6]. The carcinoma is commonly erythematous, ulcerated, friable and foul smelling. Growths on the clear part of the eyeball (cornea) are less prone to spread to other parts of the body (metastasize) than tumors on the white part of the eyeball (sclera) [7]. The present report is a case of sclera conjunctival squamous cell carcinoma in a crossbred cow.

The present case study communicates the case of ocular squamous cell carcinoma in female buffalo, which was successfully treated by surgical intervention.

Case History and Clinical Examination

A five and half year old female murrh buffalo was presented to the Teaching Veterinary Clinical Complex (TVCC), International Institute of Veterinary Education and Research (IIVER), Rohtak Haryana with the history of growth on nictitating membrane of the right eye near medial canthus (Figure 01 A) since one and half month with normal appetite and other clinical parameters. History also revealed that it reoccurs after 6 months again as same growth

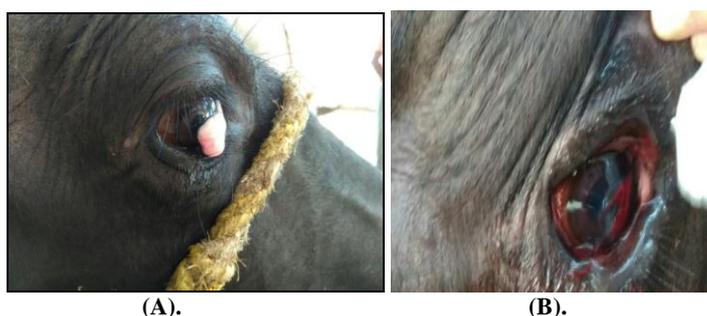


Fig 1 (A): Growth near medial canthus of eye **(B)** Showing eye after removal of growth



Fig 2 (C): Resected mass after surgical intervention

was excised 6 months before. The animal was treated by parental administration of antibiotics and topical eye drop from 20 days but improvement was found. clinical examination revealed hard growth in near medial canthus of eye but the vision of animal was normal. All the vital parameters i.e., temperature, heart rate, respiration rate was normal and it was found that there was no effect on milk production and appetite of buffalo. After all the observations surgical resection was decided and the site was prepared for asepsis.

Result and Discussion

Before surgical approach buffalo was prepared for surgery with administration of xylazine @ 0.03-0.1 mg/kg BW IV and auriculopalpebral nerve block was achieved by administration of 2% lignocaine locally. After administration of anesthetic agents the growth was excised by using surgical blade (Figure 02 C). The eye was lavaged by using normal saline. Post operatively antibiotic gentamicin @ 4 mg/kg BW was administered for 5 days along with analgesic Meloxicam @ 0.5mg/kg BW. Owner was also advised for topical application of eye ointment regularly twice a day. The animal recovered fruitfully without any secondary complication.

The proliferating epithelial cell nest/pearl cell were found on histopathological examination of excised mass (Figure 03), which confirms tumorous growth of eye i.e., squamous cell carcinoma as similarly reported by [8, 9, 1] in buffalo, in Iraqi dairy cows and Fazili *et al.* (2001) in jersey cow.. squamous cell carcinoma is the most common malignant neoplasm of epithelial origin affecting cattle and is responsible for significant economic losses [10]. Around 30 per cent of the benign tumors regress spontaneously and squamous cell carcinomas may arise *ab initio* without progressing precursor lesion [11].

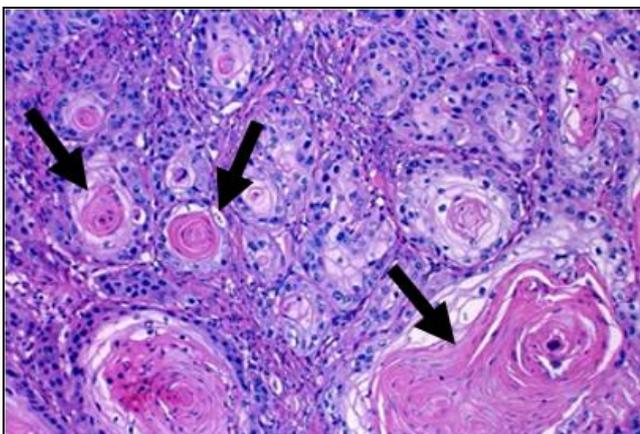


Fig 3(D): Showing epitheliotrophy and cell nest

References

1. Fazili MR, Buchoo BA, Darzi MM, Hussai SS. Ocular squamous cell carcinoma in a cow. *Indian J. Vet. Surg* 2001; 22:132.
2. Kohlirn EW, Mashadi AG. Squamous cell carcinoma in an Iranian buffalo. *Indian Vet. J.* 2008; 85:555-556.
3. Sivaseelan S, Balasubramaniam GA, Srinivasan P, Balachandran P, Thangathurai R, Dharmaceelan S. Squamous cell carcinoma of eye in a she buffalo. *Tamil Nadu Journal of Veterinary and Animal Sciences.* 2008; 3:117-118.
4. Goldschmidt MH, Hendrick MJ. Tumors of skin and soft tissues. Meuten, D.J. (ed.) *Tumors of Domestic Animals* 4th ed. Iowa State Press, 2002.
5. Anderson DE, Badzioch MS. Association between solar radiation and ocular squamous cell carcinoma in cattle. *Am. J Vet. Res.* 1991; 52:784-788.
6. Gharagozlou MJ, Hekmati P, Ashrafihelan J. A clinical and histopathological study of ocular neoplasms in dairy cattle. *Veterinarski Arhiv.* 2007; 77(5):409.
7. Perino LJ, Griffin DD, Rogers DG. G93-1184 Bovine Ocular Neoplasia Historical Materials from University of Nebraska-Lincoln Extension. 1993, 197.
8. Patel PB, Mistry JN, Suthar DN, Pate JB. Surgical Management of ocular squamous cell carcinoma in buffalo calf. *Int. Poli.* 2009; 10(2):293-294.
9. Al-Asadi RN. A survey and treatment of ocular carcinomas in Iraqi dairy Cows from 1987-2012. *Kufa J. Vet. Med. Sci.* 2012; 3(2):66- 77.
10. Pugliese M, Mazzullo G, Niutta PP, Passantino A. Bovine ocular squamous cellular carcinoma: a report of cases from the Caltagirone area, Italy. *Veterinarski arhiv* 2014; 84:449-457.
11. Kainer RA. Current concepts in the treatment of bovine ocular squamous cell tumors. *The Vet. Clin. Nor. Am. L. ani. Prac.* 1984; 6:609-622.