Squamous Cell Carcinoma of Horn and its Surgical Management - a Report of Three Cases

D. K. Giri*, Deepak Kumar Kashyap, Govina Dewangan, S. K. Tiwari, R. C. Ghosh and Bhupendra Sinha

*Corresponding author: - giri.devesh18@gmail.com

Abstract

One of the most commonly encountered neoplastic conditions of economic importance in zebu bullock is horn cancer (Udharwar et al., 2008). Horn cancer is generally unilateral and is encountered in cattle between 5-10 years of age (Tyagi and Singh, 2006). The castrated bullocks appear to be very susceptible than bulls and cows. The disease is associated with chronic irritation of the horns at their base by yoke (Shastry, 2001). The present communication describes a report of three cases of the horn cancer in bullocks.

Keywords: Squamous Cell Carcinoma, Surgical Management

Case History and Clinical Observations

Three zebu bullocks 7-8 years of age having white coat coloured were presented to the Department of Veterinary surgery and Radiology, College of Veterinary Science and A.H., Anjora, Durg (C.G.) with history of gradual bending of the horn with foul smelling, purulent discharge from the base of left horn (two cases). In one case the left horn had already fallen 4 months ago due to fight with other bullocks. There were pink soft cauliflowers like growths which were very friable and bleed easily (Fig.1.). Based on the history and clinical examination, a tentative diagnosis of the growth was made as horn cancer and thus, it was decided to do radical surgery.
Treatment and Discussion

After sedation with Xylazine @ 0.09 mg/ Kg b wt, intramuscularly the animals were controlled in lateral recumbency with left horn up. The site was prepared for aseptic surgery. Cornual nerve block was performed using 2% Lignocaine hydrochloride. The local anaesthetic was also instilled at and around the incision site. Dehorning was done by the standard procedure (Flap Method) as suggested by Amresh Kumar (2005). Following a skin incision the cornual vessels were ligated by chromic catgut no.1 to prevent haemorrhage. The incision was extended in an elliptical manner and the underlying tissues are separated at the base of horn forming a skin flap. The exposed horn was then dehorned closely to its base by embryotomy wire. The remnants of the bone were chiseled out. The cavity was thoroughly curetted to get rid of neoplastic cells. Representative sample of the tumor tissue were collected in 10% neutral buffered formalin. To avoid any possibility of haemorrhage and recurrence thermocautery was done. Gauze soaked in Tr. Benzoin was applied in the cavity for some moments and later replaced by gauze of povidone iodine. The entire skin flap was sutured by simple interrupted pattern using silk.

Fig. 1:- Figure showing the friable and bleeding cauliflower like growth.
Post operatively streptopenicillin (2.5g) intramuscularly and meloxicam @ 0.2 mg/ Kg b wt, intramuscularly for five days were prescribed. Daily dressing was also ensured with povidone iodine ointment. Cutaneous sutures were removed day 12 post operatively. The recovery was uneventful and uncomplicated in all the three cases.

The tumor tissue was processed for histopathological examination and stained with hematoxylin and eosin by standard procedure as suggested by Luna, 1968. Microscopically the tumour revealed polyhedral cells with prickle borders and large nuclei. The typical concentric layers of keratin forming “epithelial pearls” were seen (Fig. 2). The connective tissue stroma was profuse along with numerous thin walled blood vessels. The entire histopathological features suggested that the growth were of squamous cell carcinoma.

Summary

Three cases of unilateral horn cancer in bullocks with successful surgical management and their histopathological studies have been reported.

Acknowledgement

The authors are thankful to the Dean, College of Veterinary Science and AH, Anjora, Durg (C. G) for providing necessary facilities.
References


