Management of Cutaneous Squamous Cell Carcinoma (Clear Cell Variant) in Bovine - A Case Report

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Tumors of the bovine gastrointestinal tract are rare, possibly because of the low age of the sample population (Bertone, 1990). Neoplasia in cattle carries a poor prognosis because of early adenocarcinoma metastasis and the high fatality of lymphosarcoma. Squamous cell carcinoma is the second most rude type of skin cancer, with basal cell carcinoma being the most common (Rinker et al., 2001). Squamous cell carcinoma has been documented in bovine (Musser et al., 1993). Clear-cell squamous cell carcinoma is a rare variant of squamous cell carcinoma, first described by Kuo (1980) as a skin tumor. The exact etiology is unclear, but ultraviolet radiation has been suggested as a possible cause in humans (Lawal et al., 2013). This report documents a case of cutaneous squamous cell carcinoma (clear cell variant) in perianal region of a cow and its successful surgical management.

CASE HISTORY AND OBSERVATION

A six-year-old Holstein Friesian cow was reported at Dr. V.M. Jhala Clinical Complex of Veterinary College, Deesa, Banaskantha, with a history of two masses at the perineal region for the last six months (Fig. 1). A round tennis ball-like encapsulated mass was present on gross examination with the narrow neck at the right side of the anus. At the same time, another mass was present at the right vulvar lip with cauliflower-like irregular dried edges. The owner was advised surgical intervention to remove both masses.

SURGICAL MANAGEMENT AND DISCUSSION

Surgery was performed to remove the mass from both the locations under local anaesthesia. The cow was restrained in trevis in standing position. The hairs from the affected part were removed and washed with the aseptic solution. Epidural anaesthesia was achieved by infusing 4 mL of 2% lignocaine hydrochloride and infiltrating locally around the masses. The elliptical skin incisions were made at the respective locations, and the masses were removed (Fig. 2). After removing the masses, subcutaneous and skin sutures were taken through a routine method (Fig. 3). The masses measured about 2 inches and 4 inches (Fig. 4).
The tissue from both masses was collected in a separate 10% formaldehyde solution for histopathological evaluation. The histopathological examination revealed squamous cell carcinoma (SCC), neoplastic cells were arranged in variable size islands/keratin pearl supported by fibrovascular stroma. Neoplastic cells were big and polygonal with distinct cell membranes and clear and ample cytoplasm. The interstitium showed variable degrees of mononuclear cell infiltration (Fig. 5).

In conclusion, clear cell variants of squamous cell carcinoma are rare conditions in cattle. Surgical correction is required for the management. Histopathological identification aids in ruling out the nature of the tumor and predicting the tumor recurrence chances.

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REFERENCES