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## Squamous cell carcinoma in a ewe and its successful surgical management

**Radhakrishna Rao J and MS Didugu**

### Abstract

A Nellore Brown ewe of 5 years was presented to the Veterinary Clinical Complex, C.V.Sc, P.V.N.R.T.V.U, Hyderabad with a history of a large pedunculated and ulcerated growth on the ventral abdomen between the umbilicus and the udder. The cauliflower like mass grew in size over a period of a year. The growth was irregular in shape, ulcerated, hard in consistency and emitting foul odour. The tumour was excised under sedation with Inj. Xylazine @ 0.05mg per kg body weight and local infiltration with Inj. Lignocaine HCl was given as a ring block around the tumour. The ewe recovered uneventfully. The histopathology revealed that the tumour was a squamous cell carcinoma.

**Keywords:** Squamous cell, carcinoma, EWE

### 1. Introduction

Squamous cell carcinoma (SCC) is a malignant neoplasia of epithelial origin, common in bovines and uncommon in sheep. The aetiology is multi-factorial which includes lack of skin pigmentation, hair loss and sparse hair coverage in the affected locations, ultraviolet (UV) light exposure, viruses and age [1, 2]. Adult and old female sheep were the most commonly affected while the largest number of cases were recorded in summer and autumn [1, 3, 4, 5]. The location of incidence was involving eyes, under the tail, perianal and perineal regions [1, 4, 6]. In sheep, short tails are significantly associated with a high prevalence of tumours as the non-pigmented skin is exposed to UV radiation [2, 4]. The SCC is locally invasive, proliferative and destructive in nature with low metastatic potential [3]. Surgery or cryosurgery is the most common successful treatment for squamous cell carcinoma [7, 8]. This paper presents a successful surgical management of a rare case of ovine squamous cell carcinoma in an ewe on the ventral abdomen.

### 2. Case History and Observations

A 5 year old Nellore Brown ewe was presented to the Veterinary Clinical Complex, College of Veterinary Science, P.V. Narsimha Rao Telangana Veterinary University, Hyderabad with a history of a cauliflower like growth on ventral abdomen between the umbilicus and udder (Fig.1). The mass developed slowly over a period of a year. On clinical examination, the tumour was irregular in shape, pedunculated, ulcerated, hard in consistency and emitting foul odour. All the vital parameters were within the normal range.

### 3. Treatment and Discussion

Surgical excision of the tumour mass was considered [7, 8]. The ewe was sedated with Inj. Xylazine @ 0.05 mg per kg body weight (BW) and local infiltration was given as a ring block around the tumour mass with 2% Lignocaine HCl. The site of operation was prepared aseptically. An elliptical incision was taken around the mass 1 cm away from the growth and the mass was bluntly dissected and excised from the skin (Fig.2, 3). The subcuticular sutures were placed using continuous suture pattern with no.1-0 chromic catgut and the skin incision was closed using horizontal mattress suture pattern with no.1-0 synthetic polyamide suture material. The excised mass was sent for histopathological examination (Fig.5). The ewe was given Inj. Amoxicillin and cloxacillin @ 10 mg per kg BW and Inj. Meloxicam 0.3 mg per kg BW for 5 days. Antiseptic dressing was done daily for 5 days and on alternate days up to 10<sup>th</sup> postoperative day. The skin sutures were removed on 10<sup>th</sup> postoperative day. The histopathological examination revealed that the tumour was squamous cell carcinoma. The ewe showed uneventful recovery. In the present case the tumour was not aggressive or

infiltrative and its growth restricted to the skin only with no evidence of metastasis [3]. This may be the reason for the ewe's uneventful recovery.

The squamous cell carcinoma is uncommon in sheep. The affected animal is a middle aged ewe [4, 5] with the SCC in unusual location (on ventral abdomen). Most of the previous reports of SCC in small ruminants were in females (92% to 95%) [4, 5]. This is probably due to the fact that male sheep are

slaughtered before reaching their middle age, which lowers their probability to develop neoplasms [9]. This gender predilection may be due to the larger number of females kept on a holding compared to males for breeding purpose [10, 11]. The sheep in Telangana are usually reared on grazing, as a part of which their migration to all the villages of the state expose them to solar radiation for longer periods. This may be the predisposing factor for the development of SCC in sheep.



**Fig 1:** Large growth on the ventral abdomen



**Fig 2:** Surgical Excision of the mass



**Fig 3:** Surgical site after tumour excision



**Fig 4:** Skin suture application



**Fig 5:** Excised tumour

### Conclusion

Squamous Cell Carcinoma in sheep is uncommon and scarcely reported in India. This paper presents a successful surgical management of the SCC in a rare location (ventral abdomen) in a middle aged ewe.

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