

Apocrine Gland Adenocarcinoma of tail in a Buffalo Calf (*Bubalus bubalis*)- A case report

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Abstract

A one-day old female buffalo calf was presented with a hard swelling at the tip of the tail. Fine needle aspiration cytology revealed malignant cells. Under epidural anesthesia, the mass was excised and was subjected to histopathological examination. On histopathology, it was diagnosed as a case of Apocrine gland adenocarcinoma.

Keywords: Apocrine gland; Adenocarcinoma, tail; calf; *Bubalus bubalis*

Introduction

Embryonic tumours arise during embryonic, fetal or early post-natal development from a particular organ rudiment or tissue while it is still immature (Misdorp, 2002). Congenital neoplasms are uncommon in animals, especially in bovids (Sickinger *et al.*, 2009). Apocrine sweat glands tumors are rarely reported in animals (Morandi *et al.*, 2005) with occurrence frequently in dogs, occasionally in cats, and rarely in other domestic animals (Jubb *et al.*, 1993)..

Case History and Clinical Examination

A one-day-old female buffalo calf was presented to the Dept. of Veterinary Surgery and Radiology, Tirupati with a history of swelling at the tip of the tail (Fig. 1). On palpation the mass was hard. FNAC (Fine Needle Aspiration Cytology) was sent to Department of Pathology, which revealed malignant cells diagnosed as a case of tumor. It was decided to intervene surgically.



Fig. 1 Photograph showing buffalo calf with hard mass at the tip of the tail.

Treatment and Discussion

The calf was restrained in lateral recumbency and local infiltration with 10ml 2% lignocaine hydrochloride was performed at the level of the swollen mass. After development of anesthesia, the site was prepared for aseptic surgery. A tourniquet was applied at the base level of the tail to control bleeding peri-operatively. The desired level of disarticulation of the tail at 12th coccygeal vertebrae above the hard mass was determined by palpation. A semicircular incision was given through the skin and muscles on the dorsal and ventral surfaces of the tail. The incision was placed distal to the coccygeal joint to be disarticulated. The bleeding vessels were ligated and the tail was disarticulated by transection with a BP blade through the coccygeal intervertebral space. The skin incision was closed using horizontal mattress. The cut section of the mass identified to be divided into blood tinged lobules. The excised growth was subjected to histopathological examination for confirmative diagnosis, which revealed malignant neoplasm consisting mainly of epithelial cells arranged in multiple acini and papillary projections into irregular lumen with mitotic figures and the case was diagnosed as apocrine gland tumor (Fig. 2). Postoperatively, animal was given antibiotics for 5 days and analgesics for 3 days.

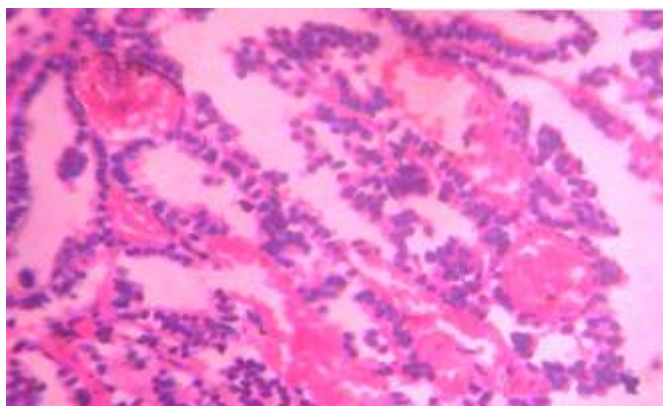


Fig. 2 The epithelial cells arranged in multiple acini and papillary projections into irregular lumen

The histopathological findings were in accordance with the findings of Gulbahar *et al.* (2002). Congenital apocrine gland adenocarcinoma in calves is not reported whereas rare occurrence of mixed apocrine adenocarcinoma of tail was reported in adult cattle by Piercy *et al.* (1994), Gulbahar *et al.* (2002) and Tessele *et al.* (2015). The occurrence in other species are uncommon and include a case in the skin of a mouflon (Morandi *et al.*, 2005), the prepuce of a horse (Anderson *et al.*, 1990) and the subcutis of the caudal abdomen of a rabbit (Miwa *et al.*, 2006). In the present study, there was no recurrence of the condition for a follow up of 5 months and surgical excision proved to be the only line of treatment.

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