Journal of
Advanced Veterinary Research
Volume 4, Issue 2 (2014) 85-87

Case Report

Surgical Management of a Rare Case of Scrotal Lymphangioma in Ongole Bull

R.V. Suresh Kumar, P. Veena, J. Devarathnam*, P. Amaravati, L. Siva Sudarshan

College of Veterinary Science, Proddatur, (A.P.), India

Accepted 30 March 2014

Abstract

An unusual case of scrotal lymphangioma in a ongole bull is described. A 5 years old ongole bull was presented with a eight month history of swelling at the neck of scrotum. On palpation the swelling was hard in consistency. Fine needle aspiration revealed no sign of malignancy. On surgical exploration of scrotal swelling, a hard mass was observed adhering to the outerlayers of spermatic cord. The mass was excised without disturbing the testes and the associated structures. Based on cytological and histopathological examination the mass was diagnosed as lymphangioma. The surgical treatment was successful and the animal had uneventful recovery without any complications.

Keywords: Lymphangioma; Scrotal tumours; Bull

Introduction

Lymphangiomas are benign tumors of lymphatic capillaries and are thought to develop when primitive lymphatic sacs fail to establish venous communication (Stambaugh *et al*., 1978). Occurrence of lymphangiomas is rare in animals with few reports in dogs (Danielsson, 1998; Belanger *et al*., 1999), cats (Lawler and Evans, 1979) horses (Gehlen and Wohlsein, 2000) and sheep (Brown *et al*., 2008). Lymphangioma is observed in any site with a predilection along the courses of embryological development of lymphatics (Hiroshi Kakinuma, 2002). Usually reported sites are subcutaneous, fascial, mediastinal, hepatic, lymph nodes, and retroperitoneal spaces. Lymphangiomas have also been diagnosed on the extremities, metacarpal pads, nasopharynx, axilla, inguinal and mammary region, retroperitoneal space, and skin of dogs. The scrotum and perineum are the least frequent sites (Hamada *et al*., 1998).

In this paper a rare case of lymphangioma occurring in the scrotum of a 5yr old ongole bull and its successful surgical management is reported.

Case observations and Treatment

A 5 years old ongole bull was presented to the Department of Surgery and Radiology, College of Veterinary Science, Proddatur with a history of swelling at the neck of scrotum for the past eight months. There was no history of previous trauma at the region. The owner noticed lemon sized swelling initially which later increased in size over the past eight months. Slight difficulty in walking was reported. On physical examination, a hard swelling was observed on the posterior side of neck of scrotum which was irreducible and painless (Fig. 1). Testes were normal bilaterally. There was no palpable lymphnode enlargement elsewhere in the body. Fine needle aspiration cytology revealed no malignancy. In order to arrive at further diagnosis, it was decided to go for surgical exploration of the scrotal swelling.

The bull was prepared for anesthesia and surgery by withholding of feed and water for 18 hours. The animal was sedated with xylazine hydrochlo-

*Corresponding author: J. Devarathnam

E-mail address: drvictory84@gmail.com

ISSN: 2090-6277/2090-6269, www.advetresearch.com

Fig. 1. Swelling on the posterior side of neck of scrotum of ongole bull.

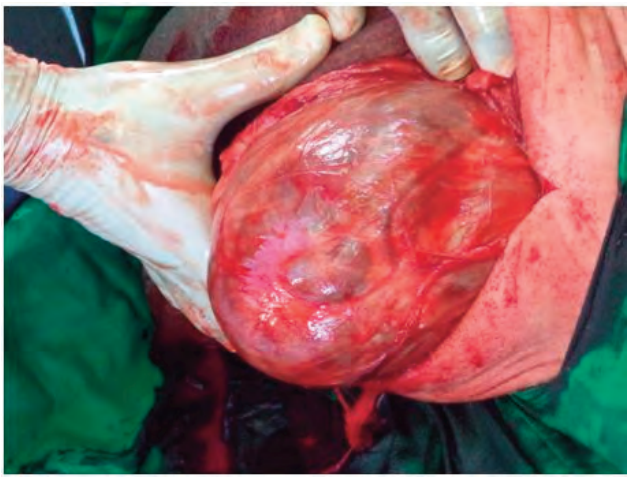

Fig. 2. Hard mass attached to the outer layers of spermatic cord.

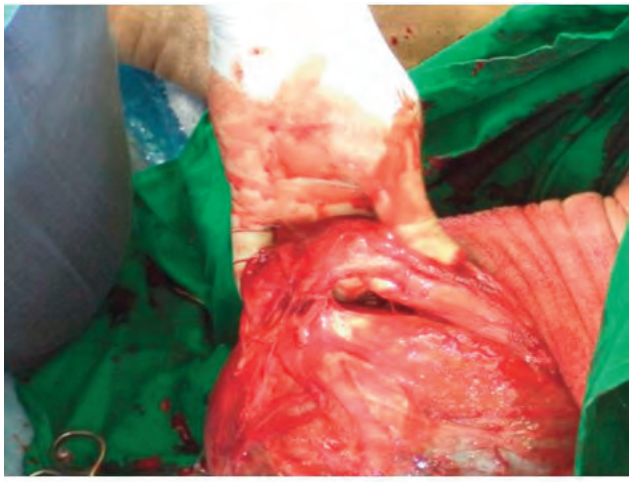

Fig. 3. Excision and removal of mass after separating from the spermatic cord.

Fig.4. Mass excised from the scrotum.

ride (Xyalxin; Indian Immunologicals) at 0.03 mg/kg BW given intravenously prior to surgery and controlled in right lateral recumbency. The surgical site was locally infiltrated with 2 % lignocaine hydrochloride solution. A 15 cm long incision was made on the swelling at the posterior aspect of neck of scrotum. After incising the skin and subcutaneous tissues, a hard mass was observed which was attached to the outer layers of spermatic cord (Fig. 2). Bleeding points were ligated using chromic catgut no.1. The mass was excised and removed after carefully separating all the attachments with underlying spermatic cord by blunt dissections (Fig. 3). The mass was around 22 cm in length with hard consistency (Fig. 4). A small piece of excised mass was preserved in 10 % formalin and sent for histopathological examination. Subcuticular sutures were applied using chromic catgut to avoid dead space. Skin was closed using silk in horizontal mattress pattern. Post-operatively antibiotics and anti-inflammatory drugs were given to the animal for ten days. The animal recovered without any complications. No recurrence reported.

Histopathological examination revealed irregular numerous clefts and channels lined by endothelial cells filled with lymphocytes with few RBC (Fig. 5). Cells lining the cleft had more rounded nucleus with hyperchromatin and few mitotic figures (Fig. 6). Based on histopathological examination the tissue mass was diagnosed as lymphangioma.

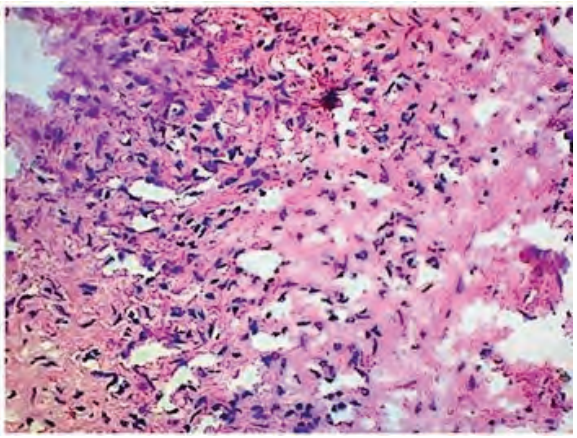

Fig. 5. Histopathology slide of excised tumor mass showing irregular numerous clefts and channels filled with lymphocytes indicating lymphangioma.

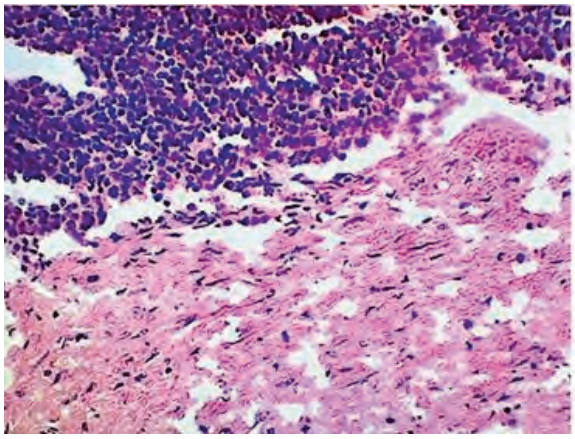

Fig.6. Cells lining the cleft had more rounded nucleus with hyperchromatin and few mitotic figures.

Discussion

Lymphangiomas, are rare, hemartomatous, congenital malformations of the lymphatic system with no risk of malignant transformation, which are very rare causes of scrotal swellings. Lymphangiomas appear as painless, gradually growing soft or firm masses, exerting considerable pressure on adjacent tissue because of their expansile growth, and appear to invade by dissection along fascial planes (Theilen and Madewell, 1987; Richard *et al*., 1997). Similar clinical findings were observed in the present case report. The treatment of lymphangiomas is early surgery. This however needs to be a complete radical resection, as incomplete resection may pose the danger of recurrence with tendency to invasive growth. Surgical treatment of multiple lymphangiomas was reported in a dog but with recurrence (Belanger *et al*., 1999). For recurrent lesions, radiation therapy was also considered with good results (Turrel *et al*., 1988).

Local recurrence of lymphangioma is common and can only prevented by complete surgical excision (Al Jabri and Gruener, 2009). In the present case surgical treatment was opted and the mass was completely excised. Animal recovered without any complications and no recurrence observed. This might be due to localization of lesion without any invasion and complete excision of mass.

Conclusion

Scrotal lymphangioma is a rare lesion that should be included in the differential diagnosis of unusual scrotal masses. However an awareness of their existence prevents misdiagnosis facilitating better diagnosis and treatment. In this present case the successful management of scrotal lymphangioma was reported.

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