SURGICAL MANAGEMENT OF A DEEPLY LOCATED RETROBULBAR LIPOMA IN A BUFFALO

Vivek Malik*, Ajeet Singh and Rudra Pratap Pandey

ABSTRACT

A graded Murrah buffalo of about 1.5 years of age was presented with the history of gradually increasing swelling in the temporal fossa of the right eye. Otherwise the animal was in good health except a little ventral deviation of eye ball. Feed and water intake of the animal was normal and no pain was evidenced upon palpation and manipulation of the swelling. The swollen region was aseptically prepared and the mass was resected out. Histopathological examination of the mass revealed the presence of compactly arranged adipocytes with eccentric nucleus suggestive of lipoma.

Keywords: *Bubalus bubalis*, buffaloes, retrobulbar lipoma, surgical

INTRODUCTION

Lipoma (Non-cancerous) is a benign tumor arising from fat cells which may be either adult type or of mature fat cells. Typically lipoma is a soft, rubbery lump located just beneath the skin. The growth of lipoma is gradual and painless in nature. It may be seen in different locations but predominantly located on the trunk and proximal limbs subcutaneously (Maxie and Jubb, 2007; Azizi *et al*., 2011) and rarely in internal organs. Irrespective of species, lipomas are usually found in adult and aged animals. Neoplasms of adipose tissue occurs rarely in buffaloes and are usually single and localized in the abdominal cavity (Ozmen, 2005). Incidence of subcutaneous lipomas appears to be quite low in cattle (Hartingan and Flynn, 1973). Surgical excision is the choice of treatment for lipoma (Veena *et al*., 2013). A case of retrobulbar lipoma in buffalo is reported here.

CASE HISTORY AND OBSERVATIONS

A graded Murrah female buffalo of about 1.5 years of age was presented with the history of gradual swelling in the temporal fossa of the right eye. Feed and water intake of the animal was normal as reported by the owner. On clinico-physical examination a swelling near the right lateral temporal fossa with a little ventral deviation of right eye ball was observed. The animal was of good temperament and healthy with normal rectal temperature, pulse rate, heart rate and haematological parameters and no pain was evidenced upon palpation and manipulation of

Department of Veterinary Surgery and Radiology, College of Veterinary Science and Animal Husbandry, Uttar Pradesh Pandit Deen Dayal Upadhyaya pashu Chikitsa Vigyan Vishwavidyalaya Evam Go-Anusandhan Sansthan, Uttar Pradesh, India, *Email: vickeyvet@gmail.com

the swelling. The consistency of the swelling was soft with less delineated boundaries looking like a superficially located lipomatous growth (Figure 1).

TREATMENT AND DISCUSSION

The bufallo was sedated with xylazine hydrochloride 0.1 mg/kg, intramuscularly followed by local infiltration of 2% lignocaine hydrochloride around the base of the growth. The animal was placed in left lateral recumbency for surgery and site was aseptically prepared. Two curvilinear cutaneous incisions were made over the growth (Figure 2). The skin and subcutaneous tissues were incised to reach to the lipomatous tissue. The lipomatous tissue was bluntly separated from the periphery to reach to its base (Figure 3). The tissue was deeply embedded in to the temporal fossa. It was further carefully dissected avoiding the major blood vessels (maxillary artery, superficial temporal artery and cornual artery) and major nerves like auriculopalpebral and cornual nerves (Figure 4). The posterior wall of the eye ball could be palpated easily. The removed fatty tissue measured about 6 inches in lenth and was occupying the whole reterobulbar space compactly (Figure 5). Muscles and subcutaneous tissue in the temporal fossa were closed as per the standard techniques using Polyglactin- 910 (2-0). Skin was closed in routine manner with non absorbable suture material nylon (Figure 6). Post operatively, inj. Streptopenicillin 2.5 gm and inj. Meloxicam 10 ml were administered intramuscularly for next five consecutive days and antiseptic dressing using povidone iodine was performed for seven days. Skin sutures were removed on 10th day post-surgery. Animal recovered uneventfully with derotation of the eye ball in its normal axis. Histopathological examination of the mass revealed the presence of compactly arranged adipocytes with eccentric nucleus suggestive of lipoma (Figure 7).

Lipomas are benign tumors composed of mature adipose tissue (Yamamoto *et al*., 2004). Most of the lipomas reported in animals are of subcutaneous tissue origin. These tumors may also be found in deeper tissues such as the pharynx, tendon, muscle, connective tissue, and extradural space (Ikede 1976; Hammer *et al*., 2005; Mc Chesney *et al*., 1980; De Ley *et al*., 1979). Lipomas are most commonly seen in dogs, less frequent in cattle and horses and are rare in sheep, cat and pigs (Pully and Stannard, 1990). Also, in most of the species the incidence of the benign tumour of lipocytes is common in adult to aged animals (Pully and Stannard, 1990; Bristol and Fubini, 1984). In present case, a swelling was reported to be increasing gradually in temporal fossa of the right eye. The consistency of the swelling was soft with less delineated boundaries looking like a superficially located lipomatous growth and anticipated to be excised easily. However, careful surgical dissection revealed that the growth was deeply located and was occupying almost complete retrobulbar area and protruded out from the temporal fossa. The surgical excision of retrobulbar lipoma was meticulously performed so as to avoid injury to vital tissues such as branches of superficial temporal artery and maxillary artery and nerve branches of mandibular, temporal, cornual and auriculopalpebral and optic nerve and posterior wall of the eye globe in the area of surgical intervention. There was uneventful recovery and no recurrence has been reported till date. Perusal of literature did not reveal any such case of retrobulbar lipoma in buffalo.

Figure 1. Soft swelling in the temporal region with little ventral rotation of eye ball.

Figure 2. Two curvilinear incisions over the growth.

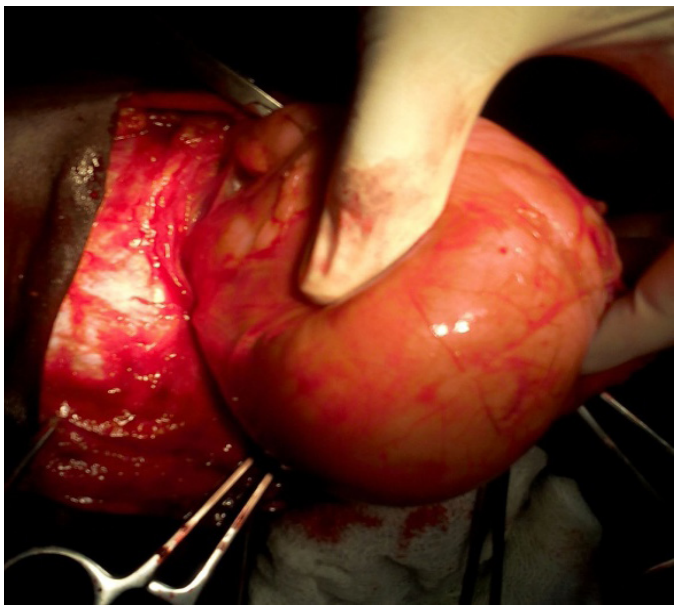


Figure 3. The underlying lipomatous tissue was carefully dissected out.

Figure 4. Careful dissection of the deeply seated lipoma.

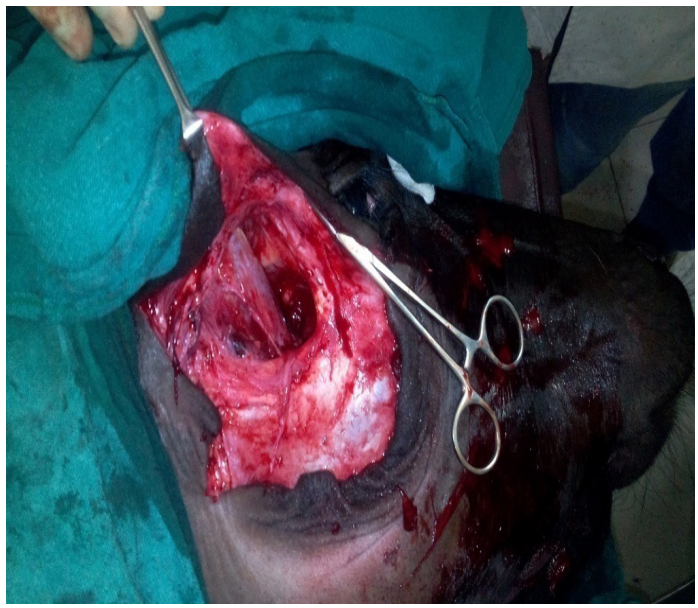
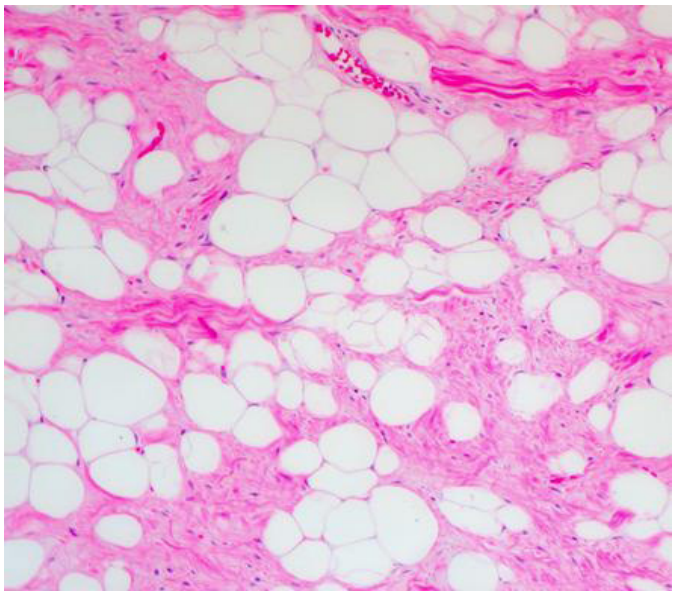


Figure 5. Temporal fossa after removal of the growth.

Figure 6. Completely excised lipomatous growth.



Figur 7. Histpathology showing lipomatous cells.

REFERENCES

Bristol, D.G. and S.L. Fubini. 1984. External lipoma in three horses. *J. Am. Vet. Med. Assoc*., **185**: 791-792.

De Ley, G., F. Verschooten and J. Hoorens. 1979. Extradural lipoma in a young bull. *Vet. Med. Small Anim. Clin*., **74**(7): 1013-1017.

Hammer, E.J., K. Chope, T.D. Lemire and V.B. Reef. 2005. A lipoma of the extensor tendon sheaths in a horse. *Vet. Radiol. Ultrasound*, **43**(1): 63-65.

Hartingan, P.J. and J.A. Flynn. 1973. An unusual form of lipoma in cattle: Multiple subcutaneous tumours in the dewlap. *Vet. Rec*., **93**(20): 536-537.

Ikede, B.O. 1976. Bilateral retroperitoneal lipomata in a neonatal calf. *Vet. Rec*., **98**(14): 280.

Maxie, G. and K.V.F. Jubb. 2007. Skin and appendages, p. 762-766. *In* Maxie, G. (edn.) *Jubb, Kennedy and Palmer's Pathology of Domestic Animals*. Saunders Ltd. USA.

McChesney, A.E., L.C. Stephens, J. Lebel, S. Snyder and H.R. Ferguson. 1980. Infiltrative lipoma in dogs. *Vet. Pathol*., **17**(3): 316-322.

Ozmen, O. 2005. Congenital lipomatosis in a Brown Swiss calf. *Revue. Med. Vet*., **156**(4): 191-193.

Pulley, T. and A.A. Stannard. 1990. Tumors of skin and soft tissue. p. 31. *In* Pulley, T. and A.A. Stannard. *Tumors in Domestic Animals*, 3rd ed. J.E.M. Oulton. Berkely, University of California, USA.

Veena, P., S. Bharati and J. Devarathnam. 2013. Surgical management of lipoma in a dog. *Intas Polivet*, **14**: 475-476.

Yamamoto, T., K. Imakiire, S. Hashiguchi, J. Matsumoto, J. Kadono, N. Hamada, T. Yoshioka and S. Kitajima. 2004. A rare case of gastric lipoma with early gastric cancer. *Intern. Med*., **43**(11): 1039-1041.