

MALIGNANT MELANOMA IN KHILLARI BULLOCK- NO RECRUDESCENCE -A CASE REPORT

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Abstract: A bullock of Khillari breed was presented to Animal Rahat emergency response team, with history of having large swelling (larger than tennis ball) on left side of the head region just above upper eye lid towards lateral canthus spreading up to zygomatic process and this swelling was present since long time and was increasing in size constantly. On clinical examination, it was a hard swelling, no pus was aspirated on puncturing with needle, and the pain was felt on palpation. The swelling was hanging from skin of forehead and while walking the swelling used to cover the left eye, causing obstruction of vision. The swelling was surgically removed under the effect of general anaesthesia achieved using Intra venous ketamine standing stun (combination of Xylazine HCl @ 0.02mg/kg body weight, Ketamine HCl @ 0.05 mg/kg body weight and Butorphanol Tartarate @ 0.02mg/kg body weight) (XKB) and local anaesthesia using local infiltration of Lignocaine Hydrochloride 2% in ring pattern around the swelling. Site was prepared aseptically and entire mass was removed after appropriate ligation of the blood vessels and then incision was closed with intra dermal sutures by using Vicryl 2-0. Antibiotic and painkiller were administered for a period of five days. Bullock recovered completely without any complications. After surgical excision of the mass, it was cut horizontally revealing blackish colour with shining lustre and further this mass was submitted to laboratory for confirmatory diagnosis. It was confirmed as "Malignant Melanoma". No recrudescence of this mass was observed even after 02 years of time.

Keywords: Melanoma, Khillari Bullock, Recrudescence.

Introduction

Melanomas are benign or malignant neoplasm arising from melanocytes or melanoblasts. They occur in all domestic animals, but among the large domesticated species, they are most significant in horses, Radostitis et. al. (2010). Most melanomas are benign, but malignancy is not uncommon. It is also important to emphasize that, currently, there is not a single diagnostic technique capable of differentiating benign from malignant melanocytic neoplasms, or predicting the survival time of the patient, Smith et al. (2002). Causes for development of melanoma are still unknown. Excessive exposure to sunlight is noted to be a risk factor in humans, but there is no evidence for that in domestic animals, Mesaric M. et. al. (2002). Melanomas are usually solitary and infrequently multiple. They are customarily

found in skin of animals but also in iris, choroid, ciliary body and retina. In cattle they appear most frequently on skin of the feet and usually benign, Howard (1994)

Melanomas are usually firm, nodular masses located dermoepidermally or sub cutaneously and grossly hyper pigmented. With regard to type of cell present, they are classified as epithelioid cell, spindle cell epithelioid and spindle cell or dendritic types of malignant melanoma. Diagnosis of melanomas is based on histological and cytological evaluations. The presence of melanin pigment is the most valuable marker for the identification of melanocytic tumours.

History, case detail and diagnosis

A Khillari breed of bullock of 5 years old was presented to Animal Rahat emergency response team with history of having large swelling (larger than tennis ball) on left side of the head region just above the upper eye lid towards lateral canthus spreading up to zygomatic process (**Fig 1 & 2**) and this swelling was since long time and was increasing in size constantly. On clinical examination, it was a hard swelling, no pus was aspirated on puncturing with needle and pain was felt on palpation. The swelling was hanging from skin of forehead and while walking, the swelling use to cover the left eye, causing obstruction of vision. History revealed that initially the growth was of small size but slowly it has been increasing day by day. Hence it was decided to excise the swelling surgically.

The swelling was surgically removed under effect of sedation by using combination of XKB (intra venous ketamine standing stun) (combination of Xylazine @ 0.02mg/kg body weight, Ketamine @ 0.05 mg/kg body weight and Butorphanol Tartarate @ 0.02 mg/per kg body weight). Abrahamsen, E J, (2008) and local anaesthesia by infiltration of Lignocaine Hydrochloride 2% in ring pattern around the swelling. Surgical site was prepared aseptically and incision was made on the base of the swelling and entire mass was excised and all the blood vessels were ligated appropriately. After removal of mass, skin edges were closed with intra-dermal suture pattern using Vicryl 2-0. Antibiotic (Stretptopenicillin @ 10mg/kg body weight) and non-steroidal anti-inflammatory drug (NSAID) (Phenyl Butazone and Sodium Salicylate @ 4.4 mg/kg body weight) medicines were administered for five days. Bullock recovered completely without any complications within 10 days' time. (**fig 5**)

After surgical removal, tumour mass was cut horizontally and cross section was blackish in appearance due to pigment and was appearing as lustre (**fig 3**). Further this tissue was submitted to histopathology laboratory for confirmatory diagnosis and it was confirmed as 'malignant melanoma' as section was showing a small strip of epidermis with increased

pigmentation of basal layer, the sub epithelial tissue showed a malignant neoplasm infiltrating into fibrous stroma, it consisted of fairly large round cells with scant cytoplasm, and darkly stained nuclei and the cells have elaborated abundant brownish pigment. Clinically as well as histopathologically the mass was confirmed as 'Malignant Melanoma' (Fig 4). No recrudescence of this mass was observed even after 02 years of time. (Fig 6)



Fig 1: Picture of Khillari bullock who was having swelling on left lateral canthus, hanging from zygomatic arch



Fig 2: Appearance of tumour after surgical excision



Fig 3: cross section of tumour showing blackish and shining surface

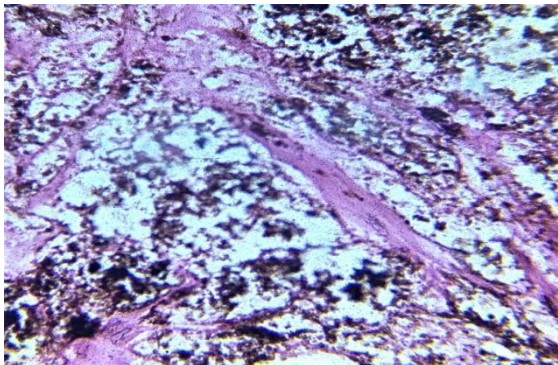


Fig 4: small strip of epidermis with increased pigmentation of basal layer, the sub epithelial tissue showed a malignant neoplasm infiltrating into fibrous stroma



Fig 5: Bullock recovered without any complications



Fig 6: No recrudescence of tumour even after two years time

Discussion

S H Smith et.al, (2002) stated melanoma is a devastating disease frequently encountered within both veterinary and human medicine. Histological evaluation of the primary mass is the most common means of diagnosis, with cytology used more frequently to document metastasis. Melanoma can vary considerably in appearance, regardless of the site. Melanoma

may be of any color, ranging from gray or brown to black, red, or even dark blue. Pigmentation is not a specific feature because other neoplastic or non-neoplastic lesions can be phenotypically similar. Melanoma vary in size, but most fall within the range of 1–3 cm. Cutaneous melanoma may be smooth domes, sessile nodules, polypoid, plaque like, or even lobulated masses larger ones are often ulcerated. In the horse they are often flat and firm, may be single or multiple, and can coalesce, creating a cobblestone appearance.

Miller M. A et al (2005) stated melanocytic tumours usually have accounted for 5-6% (range from < 1 % to 10 %) of all bovine tumours. Most occurred in the skin or sub cutis and constitute 0.3 % to 17 % of integumentary tumours. Most reported melanocytic tumours have occurred on a limb, which was also a common site, but the tumour has occurred also at numerous sites on the trunk, neck, and head. Neither recurrence nor spread of the tumour was documented which is in agreement in this case.

Vadalia, J. V et al (2006) reported malignant melanoma in nine years old Kankrej cow with history of growth present just behind the right lateral elbow joint. On palpation, the growth was hard in consistency and roughly spherical in diameter. The growth mass was excised surgically after using all the aseptic measures. The microscopic pathology revealed malignancy in dermis. The neoplastic cells showed heavy deposition of brownish black melanin granules in cytoplasm.

Tomislav Babic (2009) successfully treated a case of malignant melanoma in calf, treated surgically and no reoccurrence was reported.

Conclusion

Malignant melanoma can be removed surgically and there is no report of reoccurrence in future.

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