A CASE REPORT

Unusual Cutaneous Spindle-Cell Tumor in a Buffalo

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Case Report

A 7-year-old female water buffalo was presented to the clinic with a huge, indurated swelling filling the triangular area between the tuber coxae, tuber sacrale, and ischial tuberosity (Figs. 1 & 2). This swelling had progressed over the last 6 years. The mass was sessile and consisted mainly of two lobes (26 x 25 cm and 10 x 7 cm) with a wide area of attachment to the underlying tissue (20 x 18 cm). It was firm in consistency and covered with thickened, scaly skin which was mainly intact except for a few scattered areas of ulceration and suppuration. The hidden skin under the borders of this swelling was hypopigmented. Needle aspiration of this swelling failed to yield a tissue specimen.

Surgery

The area was prepared for aseptic surgery. Rompun® (2% xylazine HCl solution, Bayer Agricultural Division, Sharnee Mission, KS) was used for sedation at a dose rate of 0.08 mg/kg bodyweight. The operation was performed under local infiltration anesthesia with 4% procaine HCl solution. An elliptical cutaneous incision 30 cm long was made around the margins of the mass. Subcutaneous tissue was dissected and the mass was excised. The swelling was highly vascularized and copious hemorrhage was controlled by tampon, ligation, and/or crushing of the blood vessels. The skin defect was wide (about 22 x 20 cm) and healing occurred by second intention after use of continuous local dressing with antibiotics.

The mass weighed 6 kg and the cut section revealed grayish-white tissue without cavity (Figs. 3 & 4). Specimens were taken for histopathological examination which showed bundles of fibroblasts and collagen fibers running in various directions. The neoplastic fibroblasts were observed to have spindle, oval, or irregular shape with large vesicular nuclei. Some neoplastic cells and collagen fibers formed wavy whorls (Fig. 5). Some sections showed the criteria of malignancy in the form of pleomorphism and presence of typical and atypical mitotic figures (Fig. 6). Necrotic foci and focal areas of hemorrhage were seen along the neoplasm.
Diseases of Dairy Cattle
William Hedrick, DVM
This book is a comprehensive and practical text for dairy farmers and veterinarians. It provides a detailed description of common diseases and management practices to help prevent and treat them. The book is divided into seven parts, each covering a specific aspect of dairy cattle health. It is an excellent resource for anyone involved in dairy agriculture.

Goat Medicine
Mary C. Smith, DVM and David M. Sherman, DVM, MS
This is a comprehensive guide to goat medicine, providing information on common diseases, diagnosis, and treatment. The book includes chapters on infections, parasitology, and nutrition. It is an essential resource for goat owners and veterinarians.

Feeding and Care of the Horse, 2nd edition
Lois E. Leech, DVM, PhD
This is a well-organized book on horse feeding and care, covering nutrition, feeding management, and health maintenance. It is an excellent resource for horse owners and veterinarians.

Horseowner's Guide to Lameness
Ted K. Stashak, DVM and Dr. Mary H. Hoffman
This is a practical guide to horse lameness, providing information on diagnosis, treatment, and prevention. It includes chapters on specific lameness syndromes and is an essential resource for horse owners and veterinarians.

Discussion
Skin neoplasms are extremely rare in buffaloes and the most frequent skin lesions are alopecia, mange, dematitis, tail necrosis, and edematous skin disease. In a survey of 232 buffaloes in Egypt with different skin lesions, neoplasia could not be detected.

Cutaneous leiomyoma, squamous cell carcinoma, and fibromas are rarely recorded in buffaloes.

In cattle, the most common cutaneous neoplasms are papilloma, squamous cell carcinoma, fibroma, adenoma, melanoma, reticulum cell sarcoma, congenital neurofibromatosis, and mast cell tumor.

In general, buffaloes are more resistant to skin diseases than cattle. In spite of cutaneous fibropapilloma being one of the common skin lesions in cattle, buffaloes which lived side by side with the affected cattle were not affected.

Fibromas and fibrosarcomas are uncommon in large animals and arise from the dermal or subcutaneous fibroblasts. They are benign while fibrosarcomas are locally invasive with metastasis in 25% of the reported cases. Cutaneous fibrosarcoma is extremely rare in bovine animals. In a national survey of domestic animal tumors, only one skin fibrosarcoma was recorded in a bull among 720 bovine fibromas involving different tissues.

The histopathological interpretation of this mass showed the picture of a very pleomorphic fibroma with some areas of malignant change. So it appears that there was an early stage of malignancy (fibrosarcoma) which is very rare in buffaloes. In either circumstance, this neoplasm could be classified as a spindle cell tumor.

Metastasis of the mass could not be found and recurrence had not taken place 3 months postoperatively, although it might be expected to recur over the long term.

Surgical intervention is essential in such cases. Despite the huge size of this sessile mass and the large skin defect, the area healed successfully by second intention.