AN INCIDENCE OF MALIGNANT CUTANEOUS LYMPHOMA IN A BOXER DOG: A CASE REPORT

SATHEESHA S.P., DHANALAKSHMI, S., CHANDRASHEKAR, G. AND KOTTADAMANE, M. R.

Department of TVCC, Veterinary College Shimoga- 577204  (Karnataka)
E. mail: satish.vet@rediffmail.com, Cell: 09481622134

Received: August 1, 2016; Acceptance: September 10, 2016

Abstract: Lymphoma/Lymphosarcoma is one of the common types of cancer in dogs. Lymphoma affects many organs in the body including skin. The present case report discusses an incidence of malignant cutaneous lymphosarcoma in a Boxer dog. A 4 year female boxer dog presented to TVCC hospital Veterinary College Shivamogga with a history of hard swellings all over the body. The detailed clinical examination revealed the animal was very weak and presence of hard swellings all over the body especially on the dorsal side. The size of the tumour masses varying from 2 cms and 6 cms. Excision biopsy of a mass from the shoulder region was collected for histopathology (H&E stain) which revealed a highly cellular tumour composed of monotonous sheet of round to oval cells with thin rim of cytoplasm, enlarged nucleus and coarse chromatin. Few of the cell nucleus displayed cart wheel chromatin, suggestive of lymphosarcoma. Among the available records this is the first case of cutaneous lymphosarcoma in dogs in this region.

Key words: Lymphosarcoma, Cutaneous, Boxer dog, Histopathology

INTRODUCTION

Lymphoma is a common type of cancer in dogs. It results from the unregulated growth of malignant lymphocytes that often affects lymph nodes, bone marrow, liver, and spleen, but can also be seen in the eyes, skin, and gastrointestinal tract [1]. Lymphoma in dogs is most often a rapidly progressive systemic disease and fatal if left untreated in few weeks to a few months. In dogs, the most common presentation for lymphoma is multiple non painful enlargements of peripheral lymph nodes. The present case report discusses the incidence of malignant cutaneous lymphoma/lymphosarcoma in a Boxer dog.

MATERIAL AND METHODS

A 4 year old female boxer dog was presented to the college hospital Veterinary College, Shivamogga with a history of inappetence, going down condition, development of nodules all over the body since 15 days. A lump near right shoulder region was identified for excision biopsy [Fig. 2]. The area was cleanedly shaved and aseptically prepared. The area was infiltrated with local anaesthesia 2% Lignocaine Hydrochloride (Lox®, Neon laboratories limited, Mumbai) injection. The area was incised and a nodule has been collected. The length and width of the nodule has been measured. Then the nodule was transferred to 10% formalin. Then the sample was transferred to laboratory for histopathology. For histopathological examination, the tissues were processed by paraffin embedding technique. The sections (4µ) were cut using microtome and disposable blades. The sections were stained using haematoxylin and eosin [2]. Briefly, the slide was
deparaffinised by using xylene. Then the tissue was hydrated by passing through the decreasing concentration of alcohol (100%, 90%, 70%) and water. Then the tissue was stained in Haematoxylin for 3-5 minutes and washed in running tap water until the section turned blue. Further the tissue was differentiated in 1% acid alcohol for 5 minutes. Again the slide was washed in running tap water until the section was again blue by dipping in ammonia water followed by tap water wash. Finally the tissue was stained in 1% eosin vial and washed in water for 1-5 minutes and dehydrated in increasing concentration of alcohols (70%, 90%, 100%). And the tissue was cleared in xylene and fixed and examined.

RESULTS

The detailed clinical examination revealed that the animal was cachectic and dehydrated. The physiological parameters like body temperature, heart rate, respiration were on normal range. There were presence of multiple nodules varying from 2 cms to 6 cms diameter all over the body excluding head and neck more towards dorsal aspect [Figs. 1,2]. The nodules were hard, subcutaneous and freely movable covered with intact skin and no pain on palpation. Blood smear examination revealed lymphocytosis. Cytological examination of the fine needle aspiration revealed lymphocytosis. Excision biopsy of mass was collected from right shoulder region under local infiltration anaesthesia for histopathology. The excised mass was rounded, hard, well capsulated, less vascular and pale in colour. Histopathology revealed a highly cellular tumour composed of monotonous sheet of round to oval cells with thin rim of cytoplasm, enlarged nucleus and coarse chromatin. Few of the cell nucleus displayed cart wheel chromatin, suggestive of lymphosarcoma [Figs. 3,4].

To counteract the secondary bacterial infection at the excision site, the animal was kept under the treatment with a broad spectrum antibiotic like Ceftriaxone at the dose of 25mg/kg body weight.

The animal owner was advised to wait until the histopathology result will be available. The treatment continued for 5 days. The animal died 6 days from the date of presented to the clinic. The carcass did not available for post mortem as the case was too far from the hospital.

DISCUSSION

Lymphoma is an important and relatively common canine tumour, with an increased breed prevalence reported in one study in the Boxer, Scottish terrier, basset, Airedale terrier, Chow, German shepherd, Poodle, Beagle, Golden retriever, St Bernard and Bulldog [3]. The present report also substantiates the previous report regarding the breed predisposition. Among the available records this is the first report of canine lymphosarcoma in this region. Usually the incidences of lymphoma in canines were very rare. Few workers have reported the incidence of Lymphoma in dogs. Thangapandiyan, and Balachandrann [4] reported 04 cases of lymphoma and 109 cases screened using fine needle aspiration biopsy (FNAB) in Chennai, Tamil Nadu. All these 04 cases showed generalized peripheral lymphadenopathy. Gupta and Tiwari [5] reported 5.76% of lymphoma cases in dog in Chhattisgarh. Despite good advances made in veterinary oncology over the last few decades, systemic chemotherapy remains the cornerstone for treatment of lymphoma in dogs and cats. Since the present case belongs to the generalised peripheral lymphadenopathy the probability of survival of the animal is poor. Hence the animal did not respond to the treatment.

REFERENCES

[3] Vonderhaar, M.A. and Morrison, W.B., Lympho-

Explanations of figures:

Fig. 1: A Boxer dog with multiple nodules at various region of the body. Fig. 2: Site selected for excision Biopsy. Fig. 3: A thin layer of lymphocytes at various stages of development under low power magnification. H&E 4X. Fig. 4: Round to oval cells with thin rim of cytoplasm, enlarged nucleus and coarse chromatin. H&E 40X
