

# Feline Lymphosarcoma: A Case Report

by  
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## Introduction

Lymphosarcoma, a form of lymphatic leukemia, is one of the most common malignant diseases seen in the feline species. It is not a true lymphatic leukemia, but can rarely be differentiated from such histologically. Leukemia is defined as a cytologically distinct malignant disease of lymphoid or haematopoietic cell lines and tissues.<sup>1</sup> It takes on various clinical syndromes depending on which tissues and organs are primarily involved. The most common type is the alimentary form with the multicentric and thymic forms being seen less often in cats.

## Case Report

A five-year-old castrated male Siamese was examined and the following history and clinical signs were noted. The owners complained of a progressive loss of condition and anorexia of the cat in the last few weeks. They had also noted some abdominal tenderness, sneezing and coughing, and a general state of depression and lethargy.

On clinical examination the animal was found to be quite emaciated and dehydrated. There were signs of respiratory embarrassment along with serous nasal

and lacrimal discharge. Abdominal palpation revealed pain and evidence of constipation. There was a generalized lymphadenopathy of several external lymph nodes, especially in the cervical region. On examining the eyes, anisocoria due to miosis of the left pupil was noticed. Ptosis was also noticed and thus Horner's syndrome was present due to pressure on the anterior cervical ganglion from cervical lymph node enlargement. Auscultation of the respiratory and circulatory systems revealed no abnormalities.

The following lab work was done and results recorded.

	7-30-70	8-6-70
Hb.	10.4	7.7
PCV	32	25
RBC	7,140,000	4,940,000
WBC	6,000	3,400
Diff—		
Eosin.	1	SGPT 37 (normal)
Baso.	0	Serum Protein 5.4 (low)
Seg. Neutro.	69	Alk. phos. 3.5 I.U. (normal)
Lympho.	27	LDH 415 (normal)
(abnormal morph.)		
Mono.	3	
Urinalysis		
Sp. Gr.	1.037	
pH	6.0	
Albumin	100+ (increased)	
Conj. Bilurubin	+icto (elevated)	
urobilinogen	5 (increased)	

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The cat was maintained for a few days on steroids, antibiotics, and fluids. When the owners were advised of the terminal nature of the disease, they requested that the animal be euthanatized. Necropsy revealed the following pathology. The mandibular, cervical, mesenteric, and internal iliac lymph nodes were enlarged. The iliac lymph node had a chalky-white appearance on cross section. The spleen was normal in appearance. The bone marrow had a pale, pink and fatty appearance. There were no gross lesions of the respiratory, cardiovascular, or digestive systems. Large reddish nodules, 1–2 cm. in diameter, were found in the cortex of both kidneys.

Histopathology revealed several abnormalities and confirmed the diagnosis of lymphosarcoma. The bone marrow contained normal hematopoietic elements and several foci of lymphopoiesis. Large foci of lymphoid and mononuclear blast cells were found in the cortex of the kidney. The enlarged external nodes had lost their normal architecture and contained several large areas of necrosis. Foci of cells similar to those found in the kidney were also found in the lymph nodes. Hemosiderosis and reticuloendothelial hyperplasia were noted in the spleen.

## Discussion

The case discussed most closely resembles the multicentric form of lymphosarcoma. It is a more generalized form in which enlarged superficial, abdominal, and thoracic lymph nodes are commonly seen. The liver and spleen are also often involved. Clinically one would expect to see a gradual to sudden onset of inappetence and progressive wasting. In the multicentric form the cat is afebrile, lethargic and depressed with the chief diagnostic sign being external lymphadenopathy.

In the cat the alimentary form of lymphosarcoma is most commonly seen, the primary neoplastic sites are in the mesenteric and gastrointestinal nodes. There is usually a sudden onset of anorexia, depression, and loss of condition. There are usually signs of a gastrointestinal problem

and firm, painless, abdominal masses are usually quite evident on palpation.

With the thymic form of lymphosarcoma the tumor mass is usually located in the thoracic area of the thymus gland. The primary clinical signs are those of dyspnea, cyanosis, and hydrothorax. This tumor mass is often highly invasive and may occupy a large area of the thorax.

A definitive diagnosis of lymphosarcoma requires histopathologic examination. The neoplastic cell types are hard to distinguish from normal lymphoid cells with the light microscope. They are classified as neoplasms due to excessive numbers of lymphoid cells which invade tissues and destroy normal architecture. Hematological exam is of value in advancing a tentative diagnosis. Abnormal lymphocytes and/or lymphocytosis are seen in about 60% of the cases. However, one often sees a normochromic anemia which must be differentiated from hemobartonellosis. One often sees a leukopenia and lymphocytopenia instead of a lymphocytosis as would be expected in a true lymphoid leukemia.<sup>1</sup>

Treatment of lymphosarcoma is unrewarding because of the progressive and fatal character of the disease. Anti-tumor therapy including chemotherapy, x-irradiation, and surgery have been tried with little success. Corticosteroids, cyto-toxic drugs, and symptomatic therapy are often tried. Veterinarians should be aware of research being done concerning the epidemiology of this disease regarding its viral etiology. Researchers are able to transmit this disease from cat to cat with cell-free or cell-containing suspensions from tumor tissues of spontaneous cases of the disease.<sup>2</sup> Whether or not it can be transmitted to humans from exposure to cats with the disease is not known. The client should be made aware of these issues and of the poor prognosis of lymphosarcoma in deciding whether to treat or euthanatize the animal.

## References

1. Crighton, G. W.: The Diagnosis of Leukaemia in the Cat. *J. Sm. Animal Prac.* 10:571–577, 1969.
2. Jarrett, O., Laird, H. M., Jarrett, W. F. H., and Hay, D. Experimental Studies in Feline Leukaemia. *J. Sm. Animal Prac.* 10:599–603, 1969.