

CLINICAL REPORTS OF LYMPHOCYTIC LEUKEMIA IN DOGS

A.K. Srivastava¹, Sangeeta Srivastava², Ashish Srivastava³, Vineet Kumar⁴ and Neeraj Sinha⁵

¹Director, ²Physician, ^{3,4}Surgeons; Pet Aid Center, Indiranagar, Lucknow, U.P., India

⁵Scientist – F, Toxicology Division, Central Drug Research Institute (CSIR), Lucknow, U.P., India.

Lymphocytic leukemia is a form of leukemia characterized by abnormal proliferation of small lymphocytes which though morphologically normal, have functional abnormalities. As in other forms of leukemia, the abnormal cells infiltrate haematopoietic tissue and other solid organs (Leifer and Mathur, 1986). The present clinical report deals with the two cases of lymphocytic leukemia diagnosed on the basis of haematological examination.

A 6 year old G.S.D. was presented at Pet Aid Center with the history of partially off-feed, dullness, depression, general weakness, staggering gait, epistaxis and blood in urine and faeces. Physical examination revealed pale mucous membranes, slight peripheral lymphadenopathy, hepatomegaly and animal was feeling pain while palpating the abdominal region. The temperature was within the normal range. The blood was submitted for routine examination.

Another dog (Labrador, 5yr.) was presented with the history of off-feed, laboured respiration, dullness and depression, weight loss and occasional vomiting. The animal was pyretic and had pale mucous membrane with enlarged liver.

The blood picture of these two cases revealed no protozoa. The haematology was- Hb: 6.2 and 4.5g/dl. TLC 320000 and 3,90,000cells/ μ l; Neutrophils 11% and 9% lymphocytes 86% and 89% and monocytes 4% and 2%. The absolute lymphocytes in case I were 2, 65,000 cells / μ l and in case II these were 3, 65,000 cells/ μ l (normal range 900 to 4200 cells/ μ l]. This indicated that both the dogs had lymphocytosis. However the lymphocytes were morphologically normal. As such cases were diagnosed as lymphocytic leukemia and the animals were treated symptomatically on first day. The first case died on third day and no post

mortem examination could be carried out due to unwillingness of the owner. The owner of the second case did not turn up.

Lymphocytic leukemia is a disease of middle and old age (Gunz, 1982) and most of the dogs have multiple, non specific clinical signs. The diagnosis is confirmed by leukocytosis which is due to lymphocytosis. There is infiltration of small mature lymphocytes in blood and bone marrow (Leifer and Matus, 1986). The primary chemotherapeutic agent used in human medicine is the alkylating agent chloromobucil. The chloromobucil has also been effective in dogs with lymphocytic leukemia (Mac Ewen *et al.*, 1977).

References

- Gunz; F. W. (1982). Lymphocytic leukemia. In Holland, J.F., E.III eds. Cancer Medicine, Philadelphia, Lea and Febiger, pp: 1460 - 1477.
- Leifer, C.E. and Matus, R.E. (1986). Chronic lymphocytic leukemia in the dogs. 22 cases (1974 - 1984). J. Am. Vet.Med. Assoc. 189: 214 - 217.
- Mac Ewen E.G., Hurvitz, A.I and Hayes, A. (1977). Hyper viscosity syndrome associated with lymphocytic leukemia in three dogs J.Am. Vet. Med.Assoc. 170: 1309 - 1312.

