

Letter to Editor

Spontaneous lymphoma in Syrian hamsters

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LETTER TO EDITOR

Laboratory Syrian hamsters are often utilized in medical research, in special about carcinogenesis mechanisms and experimental chagasic infections [1-4]. Tumors induced by carcinogens and oncogenic viruses have been often reported in hamsters [1-3], also considered a good animal model for studies about infections by *Trypanosoma cruzi* [4]. Fortner evaluated carcinogenesis in 301 laboratory hamsters, and 17% of 223 animals (142 females) that died between 251 and 715 days of observation had malignancies. Reticulum-cell lymph sarcomas were diagnosed in seven animals (five females) [1]. The author concluded that similarly to other animal species, adrenal, ovarian, and lymphatic tumors may develop in hamsters under conditions of hormonal imbalance [1]. Moreover, carcinogenesis could be potentiated by subcutaneous injection of bile [1]. Hosseininejad *et al.*, described clinical and pathological changes of lymphoma naturally appearing in a 2.5-year old male Syrian hamster [2]. Necropsy showed a mass involving intestinal tract and lymph nodes; lymphoid cells, immune blasts and reticular cells [2]. Kondo *et al.*, evaluated by histology the malignancies found in 14 domestic Syrian hamsters plasma cytomas and lymphomas were the most common types of tumors [3]. The low prevalence of spontaneous tumors in laboratory Syrian hamsters, and the relatively advanced mean age of affected animals (19.8 months) were emphasized [3]. During a Brazilian research about chagasic pancreatitis experimentally induced in male Syrian hamsters, a 15 month-aged normal control animal was found with lymphoma; this diagnosis was done by necropsy 330 days after the beginning of experiment [4]. Lymphoma was neither found in the 73 remainder normal controls nor in the 94 age and weight matched infected hamsters [4]. Massive enlargement of liver (19.2g; 11.5% of body weight) and splenomegaly (2.8g; 1.6% of body weight) were found; worth of note, myocardium, lung, kidney,

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pancreas, epididymis, small and large intestine, abdominal skin, and bone marrow were sites of involvement by lymphoma [4]. The neoplastic cells were negative to T-cells (CD45RO, CD45RB) in addition to kappa and lambda markers; nevertheless, they were positive to the B-cell marker CD20CY. Histopathologic and immunohistochemical data were consistent with stage IV non-Hodgkin diffuse large B-cell lymphoma, but the possibility of leukemic evolution was not entirely discarded [4]. The intense bone marrow infiltration by mononuclear cells could be due to leukemia. Experimentally induced lymphomas are well known in laboratory Syrian hamsters, and lymphoma development due to aging process may be an eventual concern; however, spontaneously developed lymphomas have been scarcely reported in this animal [2,4].

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