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NEW COMPARATIVE THERAPEUTIC ASPECTS ON NHML IN HUMANS, DOGS AND CATS IN ORDER TO ENSURE CURABILITY GROWTH AND COMMON BIOTOPE ECO-HEALTH

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Abstract
Non Hodgkin malignant lymphoma (NHML) is not a simple malignant disease , having a varied symptomatic polymorphism based on neoplastic solid proliferation (lymphoma) or liquid proliferation (leukemia)of the lymphocytes (mainly B) in lymphoid tissues (lymphnodes , spleen and thymus) or in other tissues rich in lymphoid structures (intestine , liver and tonsils) The natural clinical evolution (untreated) of the malignant lymphoma is multistage, advancing rapidly through progression from the first affected lymphnodes to the neighboring lymphnodes and successive invasion of the organs. NHL therapy in humans is well studied and standardized for each type of lymphoma but according to the clinical stage and the health condition of the patient.
The use of combination therapy (cytostatic multi-agent therapy while ecosanitzing the biotope of the pacient) and the epidemiological investigation to identify common oncogenic factors involved in the etiopathogenesis issues are some of the objectives pursued.
The results obtained by associating multimodal therapy o the patient simultaneously with ecosanitizing the living environment by avoiding or diminishing oncogenic factors could be extrapolated in the treatement of the human cancers.
Identification of common oncogenic factors in human and pets habitat is a major goal, knowing that it is easier to prevent than to treat.

Key words: *NHL, chemotherapy, ecosanitizing, remission.*

INTRODUCTION

NHL is common as both a human diseases and one of so many species of economic interest (cow, sheep, pig, poultry) and also of pets (dog and cat) with similarities both in terms of how the clinical manifestations and evolution occur thus determining that the treatment for the NHL disease in humans can be extrapolated to the pets: the dog and the cat.
The aim of the study lies in the need to develop new research on NHL therapy in dogs and cats that are far lagging behind compared to those in humans and retrieve new means of treatment, thereby increasing the life expectancy and comfort of the cancerous animal.

MATERIALS AND METHODS

We treated a number of 24 dogs in various stages of clinical development of the NHL and divided the, into 4 groups each of 6 patients according to locationof the cancer: splenic, thymic, digestive and skin. Also a number of 12 cats were divided into 3 groups of 4 patients each having first batch: feline leukemia, the second batch digestive lymphoma and the third batch: mediastinal lymphoma.
Therapy consisted of administering per os or intravenously the following cytotoxic chemotherapy: Cyclophosphamide and Leukeran per os and Holoxan, Epidoxo-rubicina, Vincristine, Vinblastine, Cytosine Arabinoside in an i.v. drip. Adjuvant therapy

was performed with Prednisolon, Furosemide, Manitol, Hepatitis Forte and Antioxidant.

RESULTS AND DISCUSSIONS

Chemotherapy used for the patients in the 4 groups of dogs was first-line therapy based on: Alkylating Agents (Cyclophosphamide tablets at a dose of 50mg / m), Leukeran 2 mg tablets, Vincristine as antimitotic 0.7mg / m and Carboplatin as antimetabolite 50mg / sqm Cytostatic polychemotherapy in the IInd line has been used in severe cases, stages III and IV, and consisted of an Anthracycline-based pivot (Epirubicin 15-30mg / m), Alkylating Agent (Holoxan 160mg / m) and Antimetabolites (Vinblastine, 5mg / sqm or Cytosine Arabinoside 100 mg / sqm)
Therapy for lots of cats with NHL was based on: Anthracycline chemotherapy (Epidoxorubicina 30mg / m), Alkylating Agents (cyclophosphamide at a dose of 50mg / m and Holoxan 160mg / m) and Vincristine as antimitotic dose of 0.5mg / m.
Adjuvant therapy was used in both groups of dogs and cats for a more potent effect of chemotherapy: glucocorticoid hormones Prednisolone 1 mg / kg / day for 3 consecutive days, after which a series of 3 days with the decreasing dose 0.5 mg / kg / day was administered . Antioxidant pharmaceutical products with vitamin A, E, C, selenium used to inhibit neoplastic cell multiplication, the dose varies depending on the animal's weight. To avoid adverse effects there were used simultaneously for liver protection 175/350 mg Hepatitis Forte depending on body weight 10 days, intravenously Manitol 1ml / kg after the chemotherapy or Furosemide 5mg / m s.c.
- Batch 1 of dogs with splenic lymphosarcoma were treated with neoadjuvant cytostatic therapy and surgical excision of the spleen, cytostatic therapy being followed by adjuvant (postoperative) therapy, chemotherapy being administered both intraperitoneally and intravenously every 14 days. Survival and remission was between 6 and 24 months.
- Batch 2 of dogs with mediastinal lymphoma have undergone chemotherapy, only intravenously, improving the comfort , thus the therapy having only a palliative goal.
- Batch 3 of dogs with multicenter imunoblastoama and plasmacytomas lymphomas received multimodal therapy depending on the degree of expansion and number of lymphnodes affected. Dogs with NHL in Stage I and II without cellular discharge received first line chemotherapy and stage III and IV with cellular discharge have suffered the rigors of second line chemotherapy with the Anthracycline pivot . The remission and survival of the patients with stage I and II NHL was 9 to 16 months. Stage III and IV patients had a survival period of 3 to 9 months.
- Batch 4 of dogs with T-cell lymphoma (cutaneous form) had a rapid clinical evolution, only 2 patients survived more than 6 months, although they benefited from both first line and second line of therapy.
- Batch 1 of cats with feline leukemia responded well to Alkylating Agent therapy (Holoxan) and Anthracyclines (Epidoxorubicina) administered intravenously every 7 days alternating with corticosteroids (Prednisolone). Survival and maintaining long remission was 12 to 24 months.
- Batch 2 of cats with mediastinal lymphoma received similar treatment to batch 1 of feline leukemia, but in this cases remission was short (max 2 months) and modest survival rate.
- Batch 3 of cats with digestive track lymphoma received treatment with Alkylating Agents both per os - Cyclophosphamide - Leukeran, and intravenously Holoxan and Epidoxorubicina. Survival and remission rate was the average duration between 3 and 9 months.

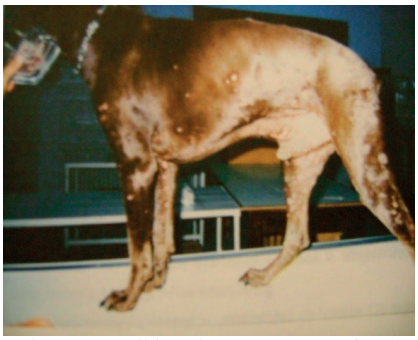

Figure 1 T-cell lymphoma (cutaneous form) in canine patient (original)

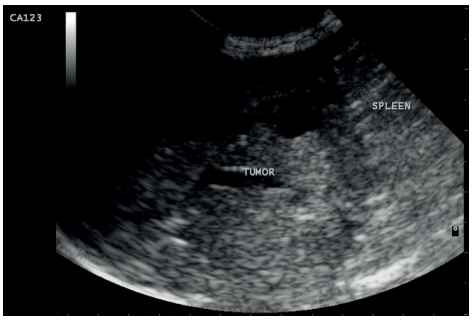

Figure 2 Splenic lymphoma in canine patient
(dr. Constantinescu Radu)

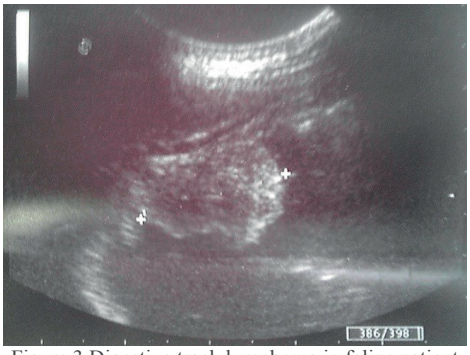

Figure 3 Digestive track lymphoma in feline patient
(FMVB clinic)

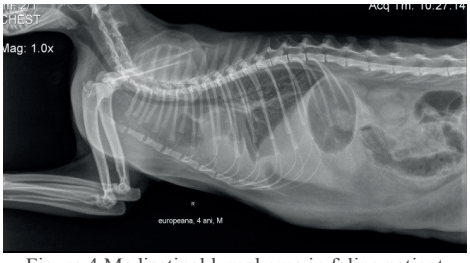

Figure 4 Mediastinal lymphoma in feline patient
(FMVB clinic)

CONCLUSIONS

NHL therapy is based on preventing - such as vaccination against feline retroviruses, preventing cohabitation of healthy animals with infected animals and avoiding the reproduction of individuals with a history of hereditary cancer and inbreeding.

Curative therapy - Dogs with primary splenic lymphoma have the best chance of survival if diagnosed early and treated with multimodal therapy.

Pacients with advanced clinical stages, although treated with second-line therapy have not had a higher survival during the period of remission, yet benefitting from increased living comfort, paraneoplastic syndromes being inhibited.

Cats express a better resistance to the cardiotoxic effect of Epidoxorubicinei compared to dogs, the survival duration beeing superior.

Establishing an early cancer therapy protocol seeks to stop disease symptoms development and induce remission.Remission can be maintained only by continuous therapy or the disease may recur, requiring permanent monitoring of patients by diagnostic screening and periodically clinical exams.

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