ASPECTS OF LYMPH NODES CYTOMORPHOLOGY ON HORSES - THE BEGINNING CELL IMAGING OF NON-SPECIFIC LIMPH NODES PROLIFERATIONS -

Coman Ana-Maria¹, Manolescu N.², Balint Emilia ², Coman Dragos-Constantin³

1-Institute of Oncology "Prof. Dr. Alex. Trestioreanu", Bucharest, Romania, email: coman.ana_maria@yahoo.com,

2-Faculty of Veterinary Medicine, Bucharest, Romania, 3- Sanitary Veterinary and Food Safety Department, Prahova, Romania

INTRODUCTION

Pathological processes of lymph nodes are quite frequently found in human and animal pathology, so typing lymph node cell imaging have a significant importance, with anamnesis and clinical examination we obtain the certainty diagnosis.

MATERIALS AND METHODS

We studied the cytomorphological imaging of marrow, peripheral blood and lymph nodes of external and/or internal on 10 cases of slaughtered horses. The morphocytological investigation of smears was performed using panoptic staining (May-Grunwald Giemsa).

RESULTS AND DISCUSSION

The results allowed the identification of three groups of animals with different cells imaging, as follows:

- the status of these investigated territories was for 3 animals and corresponded to an anatomo-clinical macroscopic examination as quasinormal (fig. 1);

- the status of lymph node irritation, so-called stage 0, of a global proliferation to lymph node cell populations was identified in 3cases;

- the status of massive limfoproliferation (stage 1-2), was found in 4 cases (fig. 2, 3, 4, 5, 6, 7). These cases are characterized by:

- massive lymphocytic blast with a predominance of "B" lymphocytes;

- the presence of a high number of mast cells;
- reticular cells proliferation;
- increased quantitative dendritic cells (spindle and globular).



Fig. 1 – Horse limph node -"Quasi normal" aspect of morphological structure. Adult and semiadult lymphocytes are prevalent; rare lymphocytes, MGG, 1000 X



Fig. 2 - Horse limph node - Phase I - "irritation lymph node syndrome" where is a predominant multiplication of lymphoblastic elements with all the "reactive" of lymph (plasma cells, reticular cells, macrophage and mast), MGG, 1000 X



Fig. 3 - Horse limph node - Phase I - "irritation lymph node syndrome" where is a predominant multiplication of lymphoblastic elements with all the "reactive" of lymph (plasma cells, reticular cells, macrophage and mast), MGG, 1000 X



Fig. 4 - Horse limph node - Phase I - "irritation lymph node syndrome" where is a predominant multiplication of lymphoblastic elements with all the "reactive" of lymph (plasma cells, reticular cells, macrophage and mast), MGG, 1000 X



Fig. 5 - Horse limph node - The second phase of "irritation lymph node syndrome" where is a predominant cell with a "reticulosis" with obvious evolutionary trend towards a "malignant lymphoma", MGG, 1000 X



Fig. 6 - Horse limph node - The second phase of "irritation lymph node syndrome" where is a predominant cell with a "reticulosis" with obvious evolutionary trend towards a "malignant lymphoma", MGG, 1000 X



Fig. 7 - Horse limph node - The second phase of "irritation lymph node syndrome" where is a predominant cell with a "reticulosis" with obvious evolutionary trend towards a "malignant lymphoma", MGG, 1000 X

CONCLUSIONS

We highlighted "de facto", present in equine pathology, of "irritation lymph node syndrome";

This "irritation lymph node syndrome" was staged in 4 stages (1-4);

Stages 1-2 are benign totally, with a normal evolution to "restitutio ad integrum" and stages 3-4 is a state of "warning" of their increased risk for their transformation into a malignant hemopathy.

REFERENCES

Balint Emilia, 2010. Veterinary hematology and oncology compared. Old Court Publishing House, Bucharest.

Berceanu S., Manolescu N., Gogiu M., Colita D., Paunescu G., Avram N., 1985. Comparative Hematology. Medical Publishing House, Bucharest.

Faramarz Naeim, P. Nagesh Rao, Wayne W. Grody, 2008. Hematopathology.Academic Press.

Manolescu N. (as editor), 1995 .Aspects of comparative cellular pathology, vol I. Ceres Publishing House, Bucharest.

Manolescu N. (as editor), 1999. Aspects of comparative cellular pathology, Volume II. Teaching and Pedagogical Publishing House, Bucharest.

Manolescu N. (as editor), 2002. Aspects of comparative cellular pathology, Vol III. Ceres Publishing House, Bucharest.

Manolescu N. et al., 1978. Hematology guide to intensive livestock, Ceres Publishing House, Bucharest.

Manolescu N., 1976. Normal and pathological cytology of bone marrow and leukocyte concentrate in domestic mammals. Ceres Publishing House, Bucharest.

Micu D., N. Manolescu, Leukemic cells. Comparative study, 1981. Publishing House Of Romanian Academy, Bucharest.

Zachary James F., M. Donald McGavin, 2007. Pathologic Basis of Veterinary Disease. Mosby-Elsevier Publishing House.