

THE STUDY OF THE "LYMPH IRRITATION SYNDROME" COMPARED TO CATTLES AND PIGS

Coman Dragos-Constantin¹, Manolescu Nicolae², Balint Emilia²

Sanitary Veterinary and Food Safety Department, Prahova, Romania, email: dragospus@yahoo.com; 2 – Faculty of Veterinary Medicine, Bucharest, Romania

INTRODUCTION

The lymphatic system is an important component of the immune system. Lymph is filtered through the lymph node sinuses, where the particulates and infectious organisms are detected and removed. Because of the exposure to immune challenges, antibody and cell-mediated immunity is mediated. As a result of such normal processes, the lymph nodes can enlarge by proliferation of normal cells or infiltration by abnormal cells.

MATERIAL AND METHOD

In this study were investigated 17 cases ,7 cattles and 10 pigs, were slaughtered for meat marketing. We examined all major lymph node chains, both external and internal. On this occasion have identified various enlargement of these structures with various aspects of their macroscopic performed on longitudinal section. Were practiced smears of lymph juices and staining them using panoptic technique (May-Grunwald Giemsa). Simultaneously we made peripheral blood and bone marrow smears.

RESULTS

The cytomorphological investigation has revealed a massive proliferation of primordial lymphoid cells with an intense proliferation of support-reticular cells. In some cases, lymph node structure consisted mainly of plasmocitoid and plasma cells.

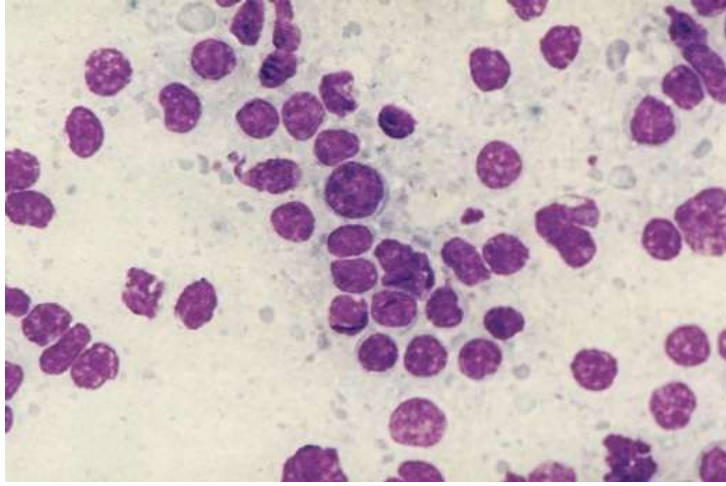


Fig. 1 - Pig lymph node – the "quasi normal" aspect of lymphocytomorphology
composition of lymph - dominant ratio 20/1 mature lymphocyte / blast cells,
MGG, 1000 X

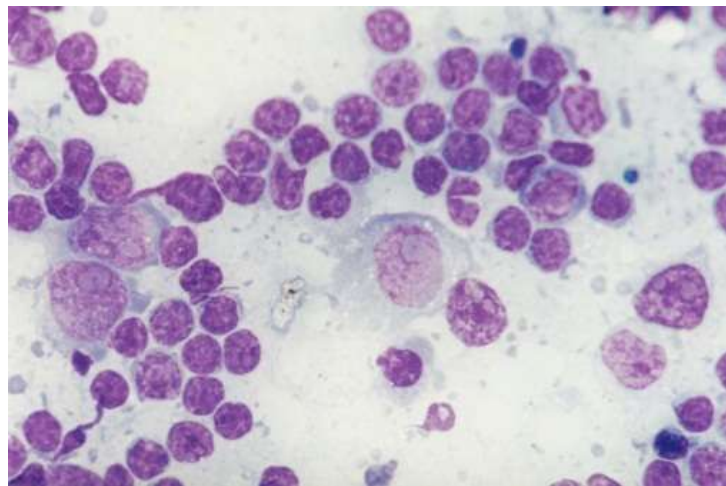


Fig. 2 - Pig lymph node - Intense blast transformation with lymph node-type items
exclusively lymphoproliferative, MGG, 1000 X

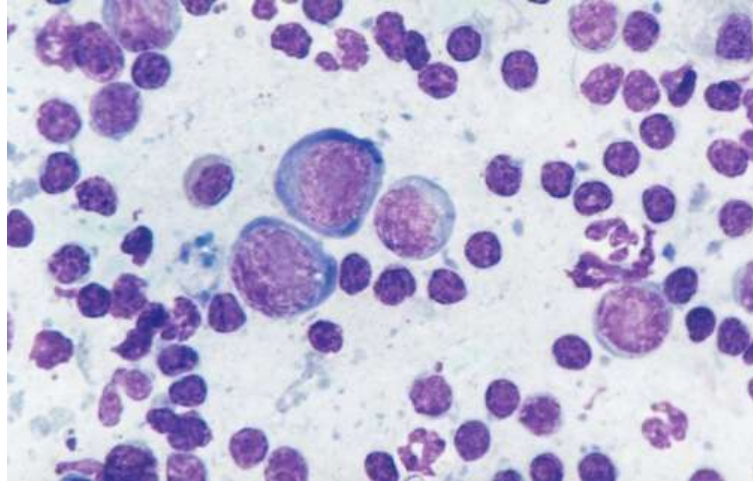


Fig. 3 - Pig lymph node - Intense blast transformation with lymph node-type items exclusively lymphoproliferative, MGG, 1000 X

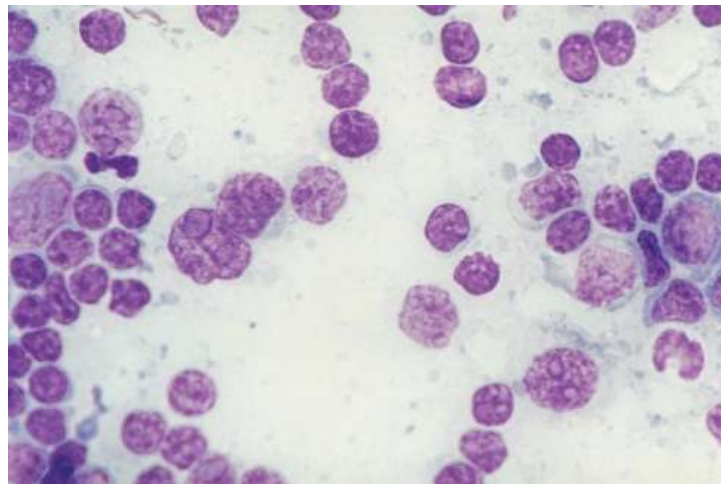


Fig. 4 - Pig lymph node - Intense blast transformation with lymph node-type items exclusively lymphoproliferative, MGG, 1000 X

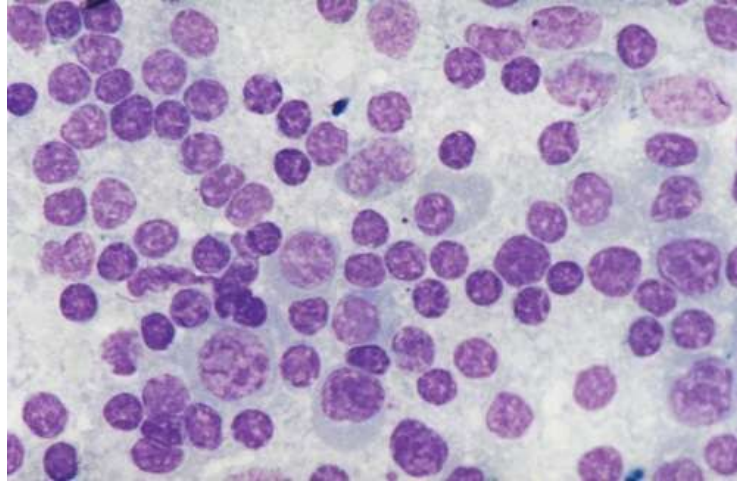


Fig. 5– Cattle lymph node - Same aspect with the appearance of the atypical lymphoproliferative cells, MGG, 1000 X

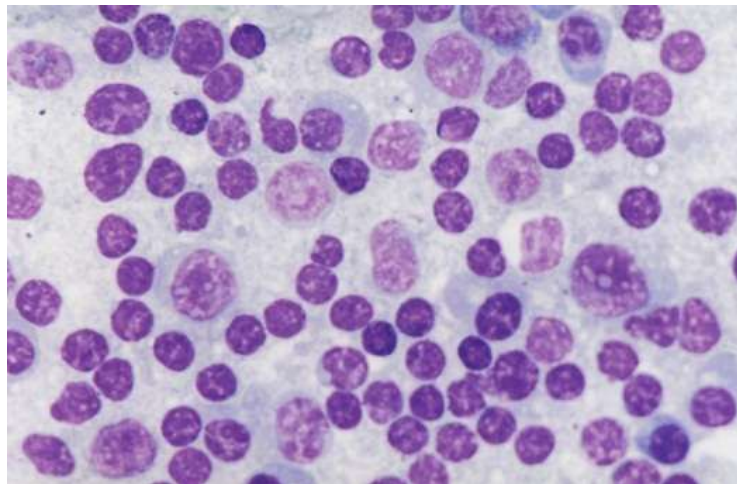


Fig. 6– Cattle lymph node - Same aspect with the appearance of the atypical lymphoproliferative cells, MGG, 1000

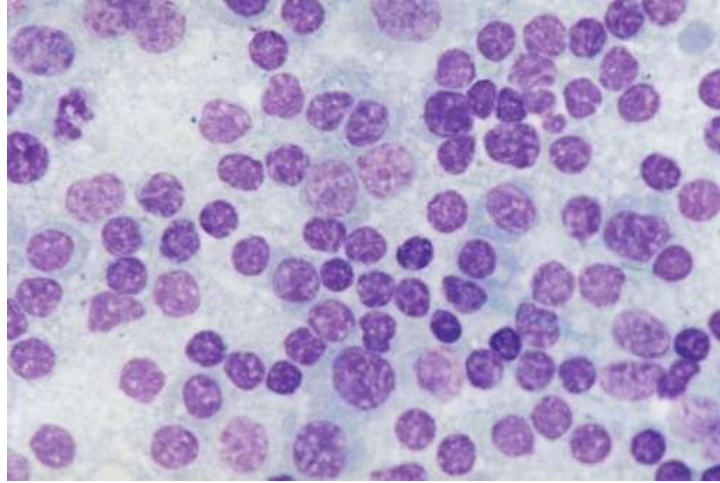


Fig. 7 – Cattle lymph node - Same aspect with the appearance of the atypical lymphoproliferative cells, MGG, 1000 X

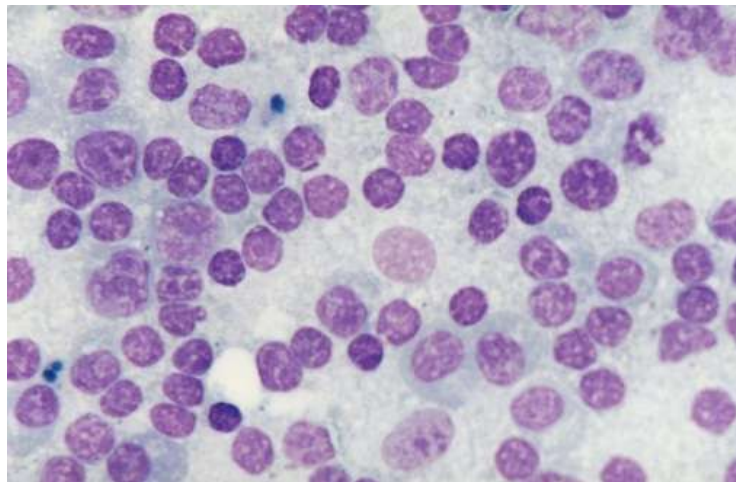


Fig. 8 – Cattle lymph node - Same aspect with the appearance of the atypical lymphoproliferative cells, MGG, 1000 X

CONCLUSIONS

From 17 cases, a total of 13 animals (9 pigs and 4 cattles) wasn't present visceral lesions that could cause such responses lymph node, so we can discuss this like a "lymph irritation syndrome" present in both species of

animals is due solely to potentially carcinogenic chemicals that are present in specific feeding of these animals.

At these two species could not put in evidence yet (due to the small number of animals investigated) the evolutive stages of this syndrome.

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.