EVALUATION OF THE ROLE OF CYTOLOGICAL STUDIES IN VETERINARY DERMATOLOGY

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Cytopathology is a leading link in the differential diagnosis of dermatological pathologies among dogs and cats. Cytological examination of biological material taken from the localization of the inflammatory process allows you to accurately and quickly carry out diagnostics and timely prescribe treatment.

Keywords: inflammation patterns, bacterial overgrowth, neutrophilic inflammation, neutrophilic and macrophage inflammation, eosinophilic inflammation, lymphocytic and plasmacytrocellular inflammation.

Evaluation of cytological samples is the last of a number of stages, which includes the selection of the localization of the lesion site, a sample of which will be taken for subsequent research. Any mistake made may lead to the failure of the diagnostic study, the inability to interpret the sample.

Sampling techniques for cytological examination of skin pathologies vary depending on the location and type of lesion is analyzed. The main sampling techniques are: scraping, smear imprint, fine needle biopsy with or without aspiration.

An important step in the diagnosis of skin lesions is the detection of microflora in the test sample. On the skin of healthy animals, on the surface of keratinocytes (the main cells of the epidermis of the human skin, which up approximately 90% of all epidermal cells) there are a few microorganisms (bacteria, yeast fungi). Among bacteria, cocci are most common, and among fungi Malassezia spp. A few bacteria and fungi have no diagnostic value. In the absence of leukocyte subpopulations in the preparation, numerous bacteria or fungi adhered to the surface of corneocytes can be detected. This cytological picture is called bacterial / fungal growth. What is very important - the clinical signs of the affected areas can be identical, both in bacterial and fungal growth. The most common cause of such lesions is atopic dermatitis. Therefore, in this case, the cytological diagnostic method, namely the differentiation of fungal dermatitis from bacterial dermatitis, is decisive in the diagnosis and choice of treatment tactics.

An important aspect is the differentiation of inflammation patterns (pattern - a term denoting a repeating pattern, pattern, model, pattern, shape or image). The following types of inflammation are distinguished: neutrophilic inflammation, neutrophilic sterile inflammation, neutrophilic and macrophage inflammation, eosinophilic inflammation, lymphocytic and plasmacytic cell inflammation. In addition, the neutrophilic inflammatory process by its nature can be septic (purulent inflammation), or sterile. Diseases causing neutrophilic and macrophage inflammation have various etiologies, including bacterial, fungal, parasitic, protozoal diseases, as well as diseases of accumulation (skin calcification, xanthomatosis) and diseases caused by foreign bodies [1]. Among the diseases causing eosinophilic inflammation, eosinophilic granuloma, eosinophilic furunculosis, sterile pustular dermatitis and the most common pathology among this small group of diseases are the hypersensitivity to insect bites [2].

Thus, the differential diagnosis of skin diseases in animals, using cytological studies, is extremely relevant and allows you to identify the nature of inflammatory reactions in the early stages of their development.

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