

## **6. Summary**

### **Examination of mast cell tumors in horses**

Mast cell tumors in horses have been detected very seldom in clinical examinations. As a result of the present examination we suggested, that these tumors are usually clinically underestimated concerning their malignancy and frequency. After systematically search in the archive of the Institute of Veterinary Pathology of the Freie Universität Berlin five archived cases were examined. After that all cases have been called as tumors. There was no connection to parasitologic or allergic process demonstrable.

Because of the extensive literary comparison of equine mast cell tumors and such of other species and the human new aspects in the evaluation of equine mast cell tumors have been added, such as determination of nuclear and cellular shape, arrangement of mast cells in tissue, dense of mast cells and cytoplasmatic granules in mast cells. The terms have been put in orders and new approaches for future examinations have been found. In addition it was visual that the previous method of searching for mitoses is not sure and is not suitable for evaluation of neoplasia. The additional immunohistochemical use of proliferation markers would be safer. As a result all cellular changes in the present examination have been called as mast cell tumors. The term "mastocytoma" is also usable as description for malignancy of these tumors. The term "equine cutaneous mastocytosis" is to use for only inflammatory alterations with presence of mast cells as described of SCHWENZER et al. (1999). In all other progresses the term „mastocytosis“ should only be used as a title like in human medicine (SPERR et al., 2001) and be avoided to describe a special disease

as it allows no conclusion of the alteration cause (neoplasia or inflammation) and is therefore no longer up to date.

Finally in resign to the examination it is an urgent necessity to send growths drawn from horses to routine examination. In addition complete anamnesis and thorough observation of the patients after treatment would be important. With increasing biopsy of bone marrow and encyme-hisochemical examination in humane medicine in the future this methods will get more importance in veterinary medicine, too, whereas it is unusual in routine diagnostic because of price reasons. Even because of the often high value of animals in equine practice it is necessary to develop more demanding and testified methods of examination.