



SERUM VEGF CONCENTRATION IN DOGS DIAGNOSED WITH CHRONIC SUPERFICIAL KERATITIS

I. Balicki, A. Sobczyńska-Rak

Department and Clinic of Animal Surgery, Faculty of Veterinary Medicine, University of Life Sciences in Lublin, Poland

Purpose.

To measure the vascular endothelial growth factor (VEGF) levels in dogs diagnosed with chronic superficial keratitis (KSC).

Methods.

The study was performed on 25 German shepherds – 14 male and 11 female, aged between 3 and 11 years, diagnosed with KSC. The VEGF levels were determined in blood serum using commercially available enzyme-linked immunosorbent assay – ELISA tests (Quantikine Canine VEGF Immunoassay, R&D Systems). The test group of sick German shepherds was subdivided into two subgroups, based on the area of corneal neovascularisation. The first subgroup - IA (9 patients) comprised dogs with neovascularisation observed in 1 to 2 quadrants of the right and left cornea, the second subgroup- IB (16 patients) comprised dogs with neovascularisation observed in 3 to 4 quadrants of the right and left cornea. The control group comprised 12 clinically healthy German shepherds – 7 male and 5 female, aged between 3 and 9 years. The obtained results were then analysed with the use of the statistical Mann-Whitney test.

Results.

The study indicated that the median serum VEGF concentration was 14.9 pg/ml. At 19.5 pg/ml the VEGF level observed in sick German shepherds was elevated compared to the values noted in healthy dogs, however, a statistically significant increase in VEGF concentration, against the values observed in healthy dogs, was only noted in the first subgroup, where the median VEGF concentration was 22.0 pg/ml.

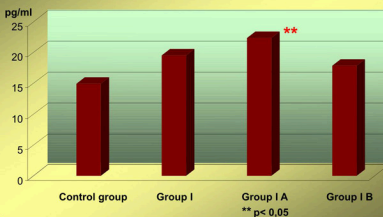


Patient of group IA - 4 years old male German shepherd VEGF concentration was 59.6 pg/ml



Patient of group IB - 4 years old male German shepherd VEGF concentration was 19.2 pg/ml

VEGF levels in German shepherds with chronic superficial keratitis



Conclusion.

Elevated serum VEGF concentration was observed in German shepherds diagnosed with KSC. A statistically significant increase in VEGF levels was observed in dogs in the first stadium of the disease – the early stage of neovascularisation.