SOME CHARACTERISTICS OF FALLOW DEER BLOOD COLLECTED IN SLOVENIA IN LAST THREE YEARS

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Fallow deer is one of the most widely spread deer species in the world as well as in Slovenia. There they are mostly kept in enclosures; only few of them roaming free. Currently there are 300 enclosures, spread all over the country, containing more than 3000 fallow deer.

As the importance of fallow deer farming increases, so does the number of the animals. The establishment of a variety of hematological and biochemical data from healthy and diseased animals is an important prerequisite for the recognition and diagnosis of illness and health problems. Therefore the determination of their blood composition becomes quite vital.

The objective of this review is to collect meaningful data in one place, while details has been discussed in the previous papers (Vengušt et al., 2002a; Vengušt et al., 2002b; Vengušt et al., 2003).

In the researches a approximately 100 healthy animals and 19 animals with *Fasciola hepatica* were shot. We have found that values in healthy shot fallow deer in Slovenia averaged for RBC 10.19 ± 2.05 × 10^{12}/L, Hb 146.3 ± 30.78 g/L, PCV 0.423 ± 0.082 L/L, MCV 42.45 ± 5.68 fl, MCH 14.46 ± 0.22 pg, MCHC 346.9 ± 45.1 g/L, WBC 2.87 ± 1.28 × 10^{9}/L of which 0.40 ± 0.36 × 10^{9}/L or 19.6 % Ne, 0.13 ± 0.16 × 10^{9}/L or 6.7 % Eo, 0.02 ± 0.04 × 10^{9}/L or 0.79 % Ba, 1.58 ± 1.25 × 10^{9}/L or 70.8 % Ly, 0.01 ± 0.02 × 10^{9}/L or 0.5 % Nb and 0.03 ± 0.04 × 10^{9}/L or 1.3 % Mo, (Vengušt et al., 2002a), AST 2.78 ± 1.92 µkat/l, ALT 0.90 ± 0.60 µkat/l, LDH 18.82 ± 8.55 µkat/l, GGT 0.63 ± 0.32 µkat/l, GLDH 0.56 ± 0.77 µkat/l, urea 6.23 ± 2.39 mmol/l, creatinine 150.9 ± 36.5 µmol/l, total serum proteins 60.58 ± 7.81 g/l, albumin 38.3 ± 8.1 g/l, glucose 5.37 ± 3.95 mmol/l, Fe 25.51 ± 11.62 µmol/l, Na 146.3 ± 4.66 mmol/l, K 11.6 ± 3.33 mmol/l, Cl 106.9 ± 3.19 mmol/l, Ca 2.5 ± 0.28 mmol/l, aP 3.7 ± 1.09 mmol/l, Mg 1.20 ± 0.18 mmol/l and Cu 16.02 ± 3.01 µmol/l (Vengušt et al., 2002b) and for shot animals with *Fasciola hepatica* RBC 10.3 ± 2.4× 10^{12}/L, Hb 148.5 ± 44.1g/L, PCV 0.394 ± 0.100L/L, MCV 39.6 ± 6.7fl, MCH 14.4 ± 2.2pg, MCHC 37.8 ± 5.9g/L, WBC 3.02 ± 1.5× 10^{9}/L of which 00.53 ± 0.42 Ne, 0.28 ± 0.25 Eo, 0.04 ± 0.03 Ba, 2.02 ± 1.15 Ly, 0.02 ± 0.03 Nb and 0.05 ± 0.03 Mo, (Vengušt et al., 2002a), AST 161.2 ± 97.5 U/L, ALT 53.8 ± 15.5 U/L, LDH 1306.2 ± 703.9 U/L, GGT 44.2 ± 16.5 U/L, GLDH 28.2 ± 27.5 U/L, urea 7.4 ± 1.8 mmol/l, creatinine 144.3 ± 21.9 µmol/l, total serum proteins 57.2 ± 7.3 g/l, albumin 36.1 ± 7.2 g/l, glucose 7 ± 5 mmol/l, Fe 28 ± 17.2 µmol/l, Na 143.6 ± 4 mmol/l, K 11.7 ± 3.7 mmol/l, Cl 107.5 ± 3.8 mmol/l, Ca 2.4 ± 0.3 mmol/l, aP 3.6 ± 1.1 mmol/l, Mg 1.18 ± 0.15 mmol/l and Cu 18.5 ± 3 µmol/l (Vengušt et al., 2003).

Two of the most characteristic features of deer blood are erythrocyte sickling and the low WBC count that have been also found in our research and are comparable to reports of other researchers.

It has been also concluded that some differences between fallow deer and domestic ruminants could be found if infected with *Fasciola hepatica*. Our data have indicated that the serum ALT activities, TSP and glucose concentration and the concentrations of liver minerals in infected fallow deer still need to be evaluated, but increases in the eosinophils number and serum enzymes activities, like in domestic ruminants, provide a useful indication of fascioliosis in fallow deer.

References

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