

DINAMIKA KADAR KREATININ, GLUKOSA, DAN KALSIUM PLASMA SEBAGAI EVALUASI FISILOGIS KUDA *DRESSAGE* SAAT LATIHAN SELAMA 30 MENIT

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Kuda (*Equus caballus*) merupakan satu dari sepuluh mamalia spesies modern dari genus *Equus* hasil domestikasi. Kuda dimanfaatkan untuk berbagai aktivitas dalam kehidupan manusia, terutama dalam bidang olahraga disiplin pacuan dan *dressage*. Penelitian mengenai dinamika kadar kreatinin, glukosa dan kalsium plasma pada kuda *dressage* masih terbatas. Tujuan penelitian ini untuk membandingkan kadar kreatinin, glukosa dan kalsium plasma kuda *dressage* sebelum dan sesudah melakukan aktivitas fisik sebagai evaluasi fisiologis. Sampel darah dari sepuluh kuda *dressage* pada dua stable di Daerah Istimewa Yogyakarta diambil sebelum dan sesudah latihan melalui vena jugularis sebanyak 5 ml dan disimpan dalam tabung lithium heparin. Sampel darah kemudian diproses pada Laboratorium Rumah Sakit Hewan Prof. Soeparwi Fakultas Kedokteran Hewan UGM dengan alat ISE *chemistry analyzer* untuk mendapatkan profil kimia darah. Hasil mengenai profil kimia darah meliputi kadar kreatinin, glukosa dan kalsium plasma kemudian dianalisis secara kuantitatif menggunakan uji parametrik uji T dan uji Wilcoxon. Hasil penelitian menunjukkan bahwa terjadi penurunan yang signifikan pada kadar glukosa darah (rerata sebelum latihan = 97,12 mg/dL dan sesudah latihan 82,5 mg/dL) dengan nilai ($p < 0,05$), serta peningkatan rerata kadar kreatinin (rerata sebelum latihan = 1,66 mg/dL dan sesudah latihan = 1,75 mg/dL) dan penurunan kadar kalsium (rerata sebelum latihan = 12,24 mg/dL dan rerata sesudah latihan = 11,71 mg/dL), meskipun secara statistik tidak ditemukan perubahan yang signifikan pada kedua data tersebut ($P > 0,05$). Berdasarkan data tersebut, diketahui aktifitas kuda *dressage* selama 30 menit menyebabkan penurunan kadar glukosa darah.

Kata kunci: *dressage*, *Equus caballus*, glukosa, kreatinin, latihan

ABSTRACT

THE DYNAMICS OF CREATININ, GLUCOSE, AND CALCIUM PLASMA LEVELS AS A PHYSIOLOGICAL EVALUATION OF DRESSAGE HORSE DURING 30 MINUTES OF TRAINING

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Horses (*Equus caballus*) are one of ten modern mammal species of the genus *Equus* that have been domesticated. Horses are used for various activities in human life, especially in the sports disciplines of racing and dressage. Research on the dynamics of creatinine, glucose, and calcium plasma levels in dressage horses is still limited. This study aims to compare plasma creatinine, glucose, and calcium levels in dressage horses before and after training as a physiological evaluation. Blood samples from ten dressage horses on two stables in Special Region of Yogyakarta were collected via the jugular vein before and after training, with 5 ml drawn each time and stored in lithium heparin tubes. The blood samples were then processed at the Prof. Soeparwi Veterinary Hospital Laboratory, Faculty of Veterinary Medicine, UGM, using an ISE chemistry analyzer to obtain blood chemistry profiles. The results regarding blood chemistry profiles, including plasma creatinine, glucose, and calcium levels, were quantitatively analyzed using the parametric T-test and the Wilcoxon test. The results of the study showed a significant decrease in blood glucose levels (mean before exercise = 97.12 mg/dL and after exercise = 82.5 mg/dL) with a p-value <0.05, as well as an increase in the average creatinine level (average before exercise = 1.66 mg/dL and after exercise = 1.75 mg/dL) and a decrease in calcium levels (average before exercise = 12.24 mg/dL and average after exercise = 11.71 mg/dL), although no statistically significant changes were found. Based on this data, it was found that 30 minutes of dressage activity caused a decrease in blood glucose levels.

Keywords: creatinin, dressage, *Equus caballus*, exercise, glucose