Effects of speed, heart rate, lactate and uric acid on the performance of Arabian horses during a 120-Km endurance race

ABSTRACT

Speed, heart rate, lactate and uric acid alterations led to reduced performance and hamper the health status of endurance horses. The aim of this study was to investigate on the effects of speed, heart rate, lactate and uric acid on the performance of Arabian horses during a 120 km endurance race. One hundred and eighty four Arabian endurance horses were physically examined and blood samples were collected post-race. After physical examination, the metabolic disordered (MD; n=130) and successfully completed (SC; n = 54) endurance horses were recognized. T-test was used for the analysis. The mean values of speed, heart rate, lactate and uric acid were significantly different ($P<0.0001$) between the MD and SC endurance horses. In conclusion, alterations in speed, heart rate, blood lactate and uric acid led to poor performance and encumbered the health status of endurance horses. Speed, heart rate, blood lactate and uric acid could be used to appraise performance and health status in endurance horses during training and endurance events.

Keyword: Endurance horses; Heart rate; Lactate; Speed; Uric acid