THE EFFECT OF ACUPUNCTURE ON SODIUM, POTASSIUM, AND CHLORIDE BLOOD PLASMA IN THOROUGHBRED HORSE AFTER EXERCISE

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ABSTRACT

Horse has loss of sodium, potassium and chloride after exercise. Acupuncture would include correction of underlying electrolytes imbalances. The acupoints that used are Spleen (SP) 6/ San Yin Jiao, Stomach (ST) 36/ Zu San Li, Bladder (BL) 13/ Fei Shu, Bladder (BL) 15/ Xin Shu, and Pericardium (PC) 6/ Nei Guan. This research was conducted on April - May 2014 at the Emporium Horse Club Kenjeran and assessment of electrolytes had been done at Clinical Pathology Laboratory of Dr. Soetomo Hospital in Surabaya. There were eight horses which used as control (P0) and then after a week used as treatment (P1). P0 did not receive treatment and P1 was treated with laser acupuncture for 5 days before exercise. Electrolytes blood plasma examination used Dimension® Rxl Max with ISE methods. The data was performed using SPSS 20.0 for Windows with Paired T test. Statistical comparisons between P0 and P1 showed there was no difference on potassium; P0: 3.53 ± 0.167 mmol/ L and P1: 3.43 ± 0.167 mmol/ L, but there was difference on sodium; P0: 134.38 ± 1.506 mmol/ L and P1: 132.00 ± 1.927 mmol/ L and chloride; P0: 104.63 ± 1.188 mmol/ L and P1: 102.38 ± 3.249 mmol/ L. Acupuncture decreased high sodium and chloride that could lead to hypertension disease and made retention of potassium.

Keywords: Acupuncture in Horse, Chloride, Exercise, Potassium, Sodium.