Abstract:

The effect of acute and chronic epinephrin administration on MCV, remains controversial. Physiological approach is needed to investigate epinephrin's effect on erythrocyte quality. The analysis unit was blood taken directly from heart, and subjected to MCV (fl). Treatment groups received epinephrin subcutaneous injection, and control groups received 0.9% NaCl subcutaneous injection. Data were taken directly after one injection (treatment 1), 30 minutes after one injection (treatment 2), and after 7 days with 6 injections/day (treatment 3). Epinephrin dose was 0.05 mg/200 gr BW rats in each injection, and injection volume was 0.5 ml. Results obtained in pretest was 53.29 Â± 1.394 fl. Treatment group with data taken directly after one injection had 54.73 Â± 1.396 fl, and control was 54.3 Â± 0.839 fl. Treatment group with data taken 30 minutes after injection had 58 Â± 0.759 fl and control 56.1 Â± 1.25 fl. Treatment group receiving 6 times injection/day from which data were taken after 7 days had 52.64 Â± 1.225 fl and the control was 52.2 Â± 0.545 fl. The results of t- test between the delta of pretest and posttest group from which data were taken directly didn't show difference (p 0.98), after 30 minutes showed difference (p 0.00), and in group receiving 6 times/day injection for 7 days didn't show difference (p 0.54). Anova test between the delta of treatment and control group showed significant difference (Hotelling's trace, p 0.00). In conclusion: acute epinephrine data taken 30 minutes after injection may increasing MCV, while acute epinephrine data taken directly and chronic epinephrin administration didn't show change MCV.