**Table.1 Effect of exercise on vital parameters (Mean ± S.E, value) in horses (n=18)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Parameters** | **Before exercise** | **After exercise** | **p value** |
| Heart rate (bpm) | 38.89 ± 1.42 | 70.67 ± 4.62 | 0.000\*\* |
| Respiratory rate (breathes/ min) | 17.83 ± 1.07 | 31.83 ± 1.49 | 0.000\*\* |
| Temperature (ºF) | 99.32 ± 0.23 | 99.87 ± 0.22 | 0.000\*\* |
| Pulse rate (bpm) | 37.17 ± 1.10 | 66.89 ± 4.42 | 0.000\*\* |

**Table.2 Effect of exercise on haematological values (Mean ± S.E, value) in horses (n=18)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Parameters** | **Before exercise** | **After exercise** | **p value** |
| Hb (g/dL) | 10.98 ± 0.61 | 12.72 ± 0.66 | 0.001\*\* |
| PCV (%) | 31.70 ± 1.81 | 36.89 ± 1.96 | 0.001\*\* |
| RBC (millions/ cmm) | 6.46 ± 0.40 | 7.43 ± 0.40 | 0.000\*\* |
| MCV (fL) | 49.30 ± 0.77 | 51.64 ± 0.57 | 0.041\* |
| MCH (pg) | 16.05 ± 0.26 | 16.67 ± 0.17 | 0.061 NS |
| MCHC (g/dL) | 32.74 ± 0.19 | 32.87 ± 0.18 | 0.533 NS |
| RDW (%) | 16.35 ± 0.13 | 16.54 ± 0.21 | 0.490 NS |
| WBC (cells/cmm) | 8922.22 ± 822.78 | 11066.67 ± 995.05 | 0.002\*\* |
| Neutrophils (cells/cmm) | 5264.06 ± 618.22 | 5474.50 ± 550.30 | 0.454 NS |
| Lymphocytes (cells/cmm) | 3204.94 ± 241.37 | 4975.44 ± 441.18 | 0.001\*\* |
| Monocytes (cells/cmm) | 354.89 ± 43.76 | 422.56 ± 79.30 | 0.454 NS |
| Eosinophils (cells/cmm) | 98.33 ± 32.42 | 144.00 ± 39.05 | 0.222 NS |
| WBC (cells/cmm) | 8922.22 ± 822.78 | 11066.67 ± 995.05 | 0.002\*\* |
| Platelets (/cmm) | 245444.44 ± 17963.87 | 211111.11 ± 16587.04 | 0.042\* |
| MPV (fL) | 6.01 ± 0.08 | 6.32 ± 0.11 | 0.006\*\* |
| PDW (%) | 16.19 ± 0.07 | 16.32 ± 0.11 | 0.121 NS |
| PCT (ng/mL) | 0.11 ± 0.01 | 0.14 ± 0.02 | 0.087 NS |

\*p<0.05 – significant,\*\*p<0.01 – highly significant and NSp>0.05 – non significant

**Table.3 Effect of exercise on serum biochemistry (Mean ± S.E, value) in horses (n=18)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Parameters** | **Before exercise** | **After exercise** | **p value** |
| Glucose (mg/dL) | 79.50 ± 3.30 | 96.44 ± 4.80 | 0.004\*\* |
| Cholesterol (mg/dL) | 96.72 ± 3.49 | 124.83 ± 9.39 | 0.010\*\* |
| Triglycerides (mg/dL) | 84.61 ± 14.61 | 132.17 ± 28.50 | 0.040\* |
| AST (U/L) | 141.33 ± 23.10 | 279.28 ± 30.19 | 0.000\*\* |
| ALP (U/L) | 119.33 ± 13.86 | 218.33 ± 31.14 | 0.004\*\* |
| GGT (U/L) | 28.89 ± 3.30 | 29.16 ± 3.49 | 0.949 NS |
| Total protein (g/dL) | 7.03 ± 0.14 | 7.73 ± 0.13 | 0.000\*\* |
| Albumin (g/dL) | 2.88 ± 0.10 | 3.29 ± 0.09 | 0.001\*\* |
| BUN (mg/dL) | 25.30 ± 1.35 | 34.83 ± 2.63 | 0.001\*\* |
| Creatinine (mg/dL) | 1.55 ± 0.10 | 2.03 ± 0.14 | 0.001\*\* |
| LDH (U/L) | 264.00 ± 18.40 | 482.44 ± 46.09 | 0.000\*\* |
| Calcium (mg/dL) | 11.64 ± 0.43 | 10.03 ± 0.38 | 0.001\*\* |
| Phosphorus (mg/dL) | 5.94 ± 0.43 | 7.43 ± 0.51 | 0.001\*\* |
| Magnesium (mg/dL) | 4.43 ± 0.23 | 3.95 ± 0.19 | 0.041\* |
| Sodium (mmol/L) | 137.51 ± 1.00 | 141.13 ± 1.20 | 0.005\*\* |
| Potassium (mmol/L) | 4.07 ± 0.12 | 4.63 ± 0.14 | 0.019\* |
| Chloride (mmol/L) | 104.73 ± 1.22 | 102.05 ± 1.03 | 0.036\* |

\*p<0.05 – significant,\*\*p<0.01 – highly significant and NSp>0.05 – non significant