

ANGIOPOIETIN-LIKE PROTEIN 3 AND HAEMATOLOGICAL PARAMETERS ASSOCIATED WITH VAGINAL ADHESIONS IN FEMALE CAMELS (*Camelus dromedarius*)

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ABSTRACT

Ten healthy fertile and eleven infertile female dromedary camels suffered from vaginal adhesions were used in this study during the breeding season. The life history was recorded and standard gynaecological examinations were performed for each infertile animal. Blood samples were collected from all females for haematological, serum angiotensin-like protein 3 (ANGPTL3) and blood biochemical investigations. Results revealed no significant difference in serum ANGPTL3 concentrations between the infertile with vaginal adhesions and control camels (2.31 ± 0.29 Vs 3.68 ± 0.62 ng/mL, respectively). The haematological parameters white blood corpuscles (WBC $\times 10^9/L$), neutrophils (NEU $\times 10^9/L$), haemoglobin (HGB, g/dL), hematocrit test (HCT, %) and mean corpuscular haemoglobin concentration (MCHC, g/dL) were significantly ($P < 0.05$ - $P < 0.01$) higher in the infertile camels with vaginal adhesions than the control camels (21.94 ± 2.47 , 17.75 ± 2.50 , 17.93 ± 0.73 , 39.26 ± 1.50 and 45.66 ± 0.92 Vs. 11.00 ± 0.91 , 7.25 ± 0.88 , 10.78 ± 0.71 , 29.37 ± 2.19 and 37.05 ± 1.75 , respectively). Serum alkaline phosphatase (ALP, IU/L), calcium (Ca, mg/DL), total protein (TP, g/dL), globulin (GLOB, g/dL), blood urea nitrogen (BUN, mg/dL) and magnesium (Mg, mg/dL) concentrations were significantly ($P < 0.05$ - $P < 0.01$) higher in the infertile than the control camels (56.27 ± 16.00 , 9.70 ± 0.41 , 7.25 ± 0.40 , 2.14 ± 0.49 , 15.73 ± 5.10 and 2.44 ± 0.22 Vs. 37.67 ± 0.55 , 8.87 ± 0.46 , 5.85 ± 0.85 , 0.98 ± 0.82 , 9.17 ± 3.66 and 2.23 ± 0.18 , respectively). Serum gamma glutamyl transpeptidase (GGT, IU/L) and phosphorus (P, mg/dL) concentrations were significantly ($P < 0.05$ - $P < 0.01$) lower in the infertile than the control camels (4.00 ± 1.18 and 4.38 ± 0.86 Vs. 11.83 ± 4.67 and 5.53 ± 0.94 , respectively). In conclusion, haematological parameters like WBS, NEU, HGB, HCT, MCHC and serum concentrations of ALP, Ca, GGT, TP, GLOB, BUN, P, Mg were differ between the infertile with vaginal adhesions and control camels.

Key words: Angiotensin-like protein 3, camel, serum, vaginal adhesion