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ORIGINAL ARTICLE

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Serum biochemistry of ostrich (*Striothio camelus*) in Iran

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Abstract Serum biochemistry (*Striothio camelus*), was determined in 75 clinically normal ostrich (42 females and 33 males, 39 under 2 years of age and 36 over 2 years). The following results were obtained: total protein 3.35±0.61 g/dl; prealbumin 0.1±0.01 g/dl; albumin 1.49±0.25 g/dl; α1 globulin 0.24±0.08 g/dl; α2 globulin 0.71±0.19 g/dl; β globulin 0.42±0.18 g/dl; γ globulin 0.63±0.21 g/dl; glucose 163±17 mg/dl; cholesterol 65±15 mg/dl; creatinin 0.26±0.05 mg/dl; triglyceride 151±56 mg/dl; urea 8.68±0.77 mg/dl; uric acid 11.87±3.56 mg/dl; aspartate amino transferase 357±95 U/l; alanin amino transferase activity 14.24±2.7 U/l; alkaline phosphatase 490±241 U/l; and lactate dehydrogenase 1124±31 0U/l.

Keywords Ostrich (*Striothio camelus*) · Biochemical parameters

Introduction

The ostrich (*Striothio camelus*) is the world's largest living bird. Ostrich fossils have been found in North Africa, Europe, and Asia, but today the bird is indigenous to Africa, where it has been raised commercially for more than 100 years. It is an environmentally friendly bird valued for low fat red meat and world-renowned leather and requires less acreage than other livestock and relatively modest amount of food and water. In addition to meat, leather, and feathers being in popular demand, some long tendons from legs and feet have been used for replacement of damaged tendons in humans. The cornea is also being assessed for use in humans. This study describes the serum biochemistry of healthy ostrich in Iran.

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Materials and methods

Blood samples were taken from the wing vein of birds maintained in one of the ostrich farms near Tehran and the serum was separated by centrifugation. Sera were stored at −20°C until used for biochemical parameter measurement. The level of total protein, glucose, triglyceride, cholesterol, urea, uric acid, creatinin, alanin amino transferase activity (ALT), aspartate amino transferase (AST), alkaline phosphatase (ALP), and lactate dehydrogenase (LDH) were measured using a standard autoanalyzer with veterinary software (Eppendorf, EPOS 5060). Serum protein fractions were determined by acetate cellulose electrophoresis (Hooshmand Fanavar, Iran).

Statistical analysis was performed using SPSS package and results were expressed as mean±SD. Significance of differences was evaluated by T test. P value ≤ 0.05 was considered as significant. Pearson's method was used for detection of correlations between parameters.

Results

All results are shown in Table 1. There were no differences detected between ages or sexes. However, significant positive correlations were seen between the following parameter pairs: ALP and glucose, ALT and ALP, AST and glucose, total protein and LDH, cholesterol and ALP, cholesterol and AST, cholesterol and LDH, cholesterol and