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Oxidant and antioxidant status in pneumonic goat in Egypt

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The current investigation was carried out to evaluate oxidative stress serum biomarkers and antioxidant concentrations in pneumonic goat. Thirty goats of different age and sex belonging to private farms in Giza governorate were used in this study. All goats were exposed to complete and comprehensive clinical examination (rectal temperature, pulse and respiratory rates) which revealed significant increase ($p \leq 0.05$) in pneumonic goats. The animals were divided into two equal groups: apparently healthy (15), diseased (15). Blood samples were collected from both groups in clean test tubes to determine various serum biomarkers as enzymatic activates of superoxidase dismutase (SOD), glutathione peroxidase (GPX) in erythrocyte haemolysate, catalase (CAT), vitamin C, vitamin E and selected biochemical parameters as (Albumin (Alb), aspartate aminotransaminase (AST), alanine aminotransaminase (ALT), urea and creatinine). The levels of superoxidase dismutase, glutathione peroxidase were significant higher ($p \leq 0.05$) in pneumonic goats than healthy while vitamins C, E were significant decrease ($p \leq 0.05$) in pneumonic goats. Serum biochemical analysis revealed significant decrease ($p \leq 0.05$) in Albumin with significant increase ($p \leq 0.05$) in ALT, AST and creatinine levels in pneumonic goats. It can be concluded that pneumonia served to produce oxidative stress in the goat with increased activities of antioxidant enzymes to facing excessive production of free radicals. For healthier status in small ruminant antioxidant supplementation is very important as supportive treatment in diseased cases and preventive aid in healthy cases. Antioxidants play a critical role in protection of animal from oxidative stress and ensuring rapid curing in diseased cases.

Biography

Sabry Ahmed Mousa has completed his PhD in 2011 from Cairo University–Faculty of Veterinary Medicine in cattle medicine that dealt with the clinical studies on cellular and biochemical constituents of rumen liquor and blood in cattle. He has been a member in national projects in rumenology titled (Diagnostic, Therapeutic and Productive value of the rumen ciliates in ruminants) and (Banking of rumen ciliate for improvement of ruminant farm animals production). He has published international book in LAMBERT Academic Publishing under title. He has 6 papers published in international journals in a field of ruminant medicine.

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