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Haemogram and serum enzymes activities of Newcastle disease virus challenged broiler chickens following supplemental treatment with *Aloe vera* extract

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Aloe products have been promoted for use in constipation, coughs, diabetes, arthritis, immune-system deficiencies and many other conditions, but the clinical efficiency in chickens is unknown. Therefore, the study was designed to determine the haemogram and serum enzymes activities of Newcastle disease virus (NDV) challenged broilers following supplementation of *Aloe vera*. One hundred and forty day-old broilers were grouped into seven, 20 broilers/group. They were treated with different concentrations of the extract for 30 days. Both vaccinated and unvaccinated groups were challenged with 0.2 saline suspension of 106 ELD50 intradermal inoculation of NDV challenged strain on the 30th day. Increase in serum protein, aspartate transaminase, creatinine, urea and gamma globulin levels among challenged group was concentration dependent (50 mg>100 mg>150 mg) but not statistically significant ($P>0.05$). Lymphocytosis among supplemented and challenged group was concentration dependent (50 mg >100 mg>150 mg) and statistically significant ($P<0.05$). Control group lymphocyte count was within normal range (55-70 %). Heterophil and lymphocyte (H/L) ratio was lower in supplemented and challenged group. Oral intake of *Aloe vera* modulated leucocytes proliferation of the broilers and enhanced cell differentiation in favour of lymphocyte. Serum enzymes activities in broilers challenged with NDV following supplementation with *A. vera* juice were positively influenced, and modulated the excessive leakage of protein, globulin, creatinine and alkaline phosphatase in infected birds. *Aloe* extract may therefore be seen as a good immunomodulator.

Biography

Tony Ifeanyi Ojiezeh obtained his PhD from University of Benin, Benin City. He is a Biomedical Scientist of high repute and Laboratory Manager before joining academics in 2008. He is the immediate past Head of Department and has published more than 20 papers in known scientific journals. He is a Senior Lecturer in Afe Babalola University, Ado- Ekiti, Nigeria.

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