The Effect of \textit{In Ovo} Exposition to Ethanol Upon Osteogenesis of the Chicken Embryo.

Boussouar H, Khenenou T, Bennoune O and Berghiche A.


DOI: \url{https://dx.doi.org/10.36380/jwpr.2019.4}
ABSTRACT

Excessive alcohol consumption by a pregnant woman may delay foetal development and may cause malformations. In this study, the model of the chicken embryo to demonstrate the teratogenic effect of ethanol (33%) on the chicken osteogenesis on the 10th day of embryonic development have been used. 49 fertilized eggs were used in present investigation. Hence, different doses of ethanol were injected into the chicken embryos at 33% (20, 40, 80μl) in the air space at gastrulation and, on the other hand, an equivalent amount of the mentioned doses of distilled water were injected into the control-group eggs which was done once in every two days in order to maintain a high concentration in the blood. Experiments were repeatedly and independently carried out for three times. The eggs were incubated in a humid incubator at the temperature of 37.7 °C and at 60-65% of humidity. On the 10th day of incubation, the embryos were taken out and fixed in formal in at 10%. After that, the eggs were sectioned at 5μm of thickness with a Leica micrtome and, then, stained with the Hematoxylin and eosin. Histological examination has revealed that the exposition of chicken embryos to ethanol (33%) delays the skeletal development in a dose-dependent manner by reducing the length of the cartilaginous proliferation zone and hypertrophic zone during the bone formation period. Furthermore, under the effect of ethanol, the cell proliferation activities were repressed. In conclusion, present results indicated that using ethanol to treat chicken embryos at early stages caused considerable malformations and a decreased in the embryo survival rate. The exposition to alcohol affects the chicken osteogenesis in a dose-dependent manner.

Keywords: Chicken embryo, Ethanol, Malformations, Osteogenesis, Teratogenic effect
Aflatoxin induces stress and increases mortality rate during infection in poultry, especially broiler aflatoxicosis in broiler chickens. A total of 120 chickens were divided into four groups, group A

ABSTRACT

Aflatoxin is a worldwide problem in poultry industries as it is known to contaminate poultry feed. Ouennes H, Afri Bouzebda F, Bouzebda Z, Majdoub S, Djaout A and Adnane Smadi M. (30.33±4.68% vs 30.33±4.68%), only the volume was significantly higher (0.72±0.12ml vs 0.17±0.08ml). However, the effects of conservation in situ, at 25°C and 4°C for 24h, showed a significant difference for viability and motility of the spermatozoa recovered from vas deferens, compared to the epididymis. No significant difference was observed between the flushing and float-out methods. The characterization of Post-Mortem Sperm of Local Chicken Cocks in Eastern Algeria.

Conclusions: Good quality semen samples can be collected from the vas deferens with the flushing method, and semen of Algerian local cocks can be preserved at 20°C for 24h.

Keywords: Post-mortem sperm, conservation in situ, flushing, float-out, good quality semen samples, vas deferens.

The aim of the present study was to determine the effect of different bedding materials on the hematological and serum biochemical parameters of the broiler chickens. A completely randomized design was employed for the research in which the treatment were five bedding materials: rice, hulls, groundnut hulls and sharp sand, both with and without yeast containing ration. The findings also indicated in the hematological parameters that bedding materials caused a significant difference in the hemoglobin content, white blood cell count and mean corpuscular hemoglobin, but no significant differences in the other parameters (Heterophils, monocytes, red blood cell count).

Parameters in Broiler Chickens.

The effects of feeding baker's yeast performance of Cobb 500 broilers were studied. Four nearly isocaloric and isonitrogenous starter and finisher rations were prepared. 240 chicks with an average initial body weight of 42g were randomly divided into 12 groups contained 4 treatments each. Treatment rations were containing 0, 0.5, 1.5 and 2.5% of baker's yeast. The highest feed intake than the other supplemental groups. The highest daily body weight gain was recorded in broilers fed T4 rations during starter phase, finisher phase and entire experimental period. Feed conversion ratio of T4 and T3 groups was better than T2 and T1. T3 and T4 groups had higher eviscerated percentages. Blood parameters results showed that fed broilers is significantly affected by the supplementation of baker's yeast. The highest net income, marginal rate of return and chicks' sale to feed cost were obtained for T3 group with 2.5% of the total ration and improve the overall performance of broilers without compromising the quantity of feed. The ME content of the rations during the starter and finisher phases were 2.5% of the total ration and improve the overall performance of broilers without compromising the quantity of feed. The ME content of the rations during the starter and finisher phases were 2.5% of the total ration and improve the overall performance of broilers without compromising the quantity of feed.
Keywords: control. In addition, the other 3 groups have fed on free microalgae biomass balanced ration.

Furthermore, future studies should be applied with increasing microalgae percent in poultry feed.

In conclusion, microalgae can be used in broiler ration with no deleterious effect on growth rate, weight gain, poultry viability and immune response.
Abstract

Clostridium perfringens is the most important cause of enteritis in domestic animals, in chicken and turkey it well known as pathogen responsible for necrotic enteritis, hepatitis, and cholecystitis. The disease in turkey characterize by either severe form with high rate of mortalities or subclinical form of reduce growth rate and increase condemnation rate. The major factor responsible for pathogenicity of Clostridium perfringens was alpha toxin. The aim of present study was to prepare of Clostridium perfringens alpha Toxoid vaccine for controlling the necrotic enteritis disease. The vaccine was prepared at different doses depend on lethality of toxin (24, 48 and 96 Minimum Lethal Dose) for controlling necrotic enteritis disease. Antibody titer elicited by vaccination was measured by toxin neutralization test, ELISA, and challenge test. It revealed that antibody titer expressed by international antitoxin unit per ml was 7.4, 4.1 and 1.26 respectively according to the mentioned dose, and also the protection percent against challenge was 100% when vaccinated with either 48 or 96 Minimum Lethal Dose, while it gave 80% when vaccinated with 24 Minimum Lethal Dose. It concluded that use of Clostridium perfringens alpha Toxoid with recommended dose of 48 MLD able to protect turkey for 6 months.

Keywords: Alpha toxin, Clostridium perfringens, Turkey, Type A, Vaccine