The Effect of *In Ovo* Exposition to Ethanol Upon Osteogenesis of the Chicken Embryo.

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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 formalin 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 is a worldwide problem in poultry industries as it is known to contaminate poultry feed. The objectives of this study was to observe the pathological effects due to aflatoxicosis in broiler chickens. A total of 120 chickens were divided into four groups, group A fed with a basal diet without aflatoxin contamination, group B with aflatoxin (> 1 ppb), group C with aflatoxin (51 ppb), and group D with aflatoxin (101 ppb). Chickens were kept under controlled conditions for 24h at 20°C and after refrigeration at 4°C for 24h). The quality was significantly higher (0.13±0.05ml vs 0.72±0.12ml) in the vas deferens compared to the epididymis, whereas significant difference for viability and motility of the spermatozoa recovered from vas deferens, concluded that 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 retrieval techniques, the flushing and float-out methods in the collection of semen samples, semen quality, sperm abnormalities.

Recent Update: Effects Due to Aflatoxin in Broiler Chickens

Effect of Different Bedding Materials on the Hematological and Serum Biochemistry of Broiler Chickens

Effect of Different Bedding Materials on the Hematological and Serum Biochemistry of Broiler Chickens. A completely randomized design was employed for the research in which the treatment were five bedding materials (rice hulls, groundnut hulls, wood shaving, sharp sand and control). The treatments were replicated three times each with ten birds in each experimental unit. The birds were randomly divided into 12 groups contained 4 treatments each. The average initial body weight of 42g were randomly divided into 12 groups contained 4 treatments each. The findings also indicated in the hematological parameters that bedding materials caused significant difference in the hemoglobin content, white blood cell count and mean corpuscular volume. And the hemoglobin, but no significant differences in the other parameters (Heterophils, monocytes, lymphocytes, eosinophils, basophils, mean corpuscular hemoglobin, mean corpuscular hemoglobin concentration and mean corpuscular volume). The characterization of Post-Mortem Sperm of Local Chicken Cocks in Eastern Algeria.
Using microalgal biomass in animal diets has been studied recently. Many species of cultivated microalgae have been found to be potential feed additives. However, despite the potential benefits, concerns have been raised regarding the safety and efficacy of microalgae as a feed additive. In this study, we aimed to evaluate the performance of broiler chickens fed diets containing microalgae biomass harvested from high-rate algal ponds (HRAP).

**Materials and Methods**

Twenty birds, three of them have fed on balanced broiler ration supplied with 1% weight per weight of microalgae biomass. The other groups have been fed on free microalgae biomass balanced ration. In addition, the other groups have been fed on microalgae biomass balanced ration with 10% and 20% (W/W) of microalgae biomass.

**Results**

The results showed that the microalgae have no hazard effect on growth rate, weight gain, poultry viability and immune response. In conclusion, microalgae can be used in broiler ration with no deleterious effect on growth rate, weight gain, poultry viability and immune response.

**Conclusion**

The present study demonstrates the potential of microalgae biomass as a feed additive in broiler ration. Further research is needed to optimize the inclusion level and identify the optimal species and strains for use in broiler nutrition.
ABSTRACT

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

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