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

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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 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
ABSTRACT

Aflatoxin induces stress and increases mortality rate during infection in poultry, especially broiler chickens. 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 with aflatoxin (< 1 ppb), group B with aflatoxin (> 1 ppb but ≤ 5 ppb), group C with aflatoxin (> 5 ppb but ≤ 10 ppb), and group D with aflatoxin (> 10 ppb). The results showed that the group D had significantly higher mortality rate, weight loss, and stress level compared to the other groups. The immune response and antibody production were also significantly lower in group D. The hematological parameters, including hemoglobin, white blood cell count, and mean corpuscular hemoglobin, were significantly lower in group D. The results indicated that aflatoxin has a toxic effect on broiler chickens, and further studies are needed to investigate the mechanism of aflatoxin-induced stress and mortality.
20 birds, three of them have fed on balanced broiler ration supplied with 1% weight per weight.

Using of microalgae collected from high rate algal ponds (HRAP) as a feed additive to algae were found effective in maintaining animal growth performance, and in improving body serological response and viral shedding post vaccination with NDV vaccines as well as similar.


Habitu H, Khenens T and Lattalid J (2019). A Meta-Analysis on Antibiotic Residues in Meat of Intensively Broiler Chicken Farms (45.26% of the samples analyzed.

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The current study was conducted to examine the influences of dietary medicinal plant type and dosage. Moreover, the birds fed diet supplemented with S. officinalis peel dried powder in two levels (10 and 20 gr/kg) of dietary on productive performance and some.

The fatty acid composition of turkey meat was as follows: saturated fatty acids 50.67% in white and 58.45% in red meat; monounsaturated fatty acids 27.62% in white and 23.57% in red meat; polyunsaturated fatty acids 21.26% in white and 23.95% in red meat. Palmitic and stearic are the major saturated fatty acids, where the oleic and linoleic acids are in a


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Egg production, Egg quality, Laying quails, Medicinal plants, Thiobarbituric acid

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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 turkey is characterized by either severe form with high rates of mortality or subclinical form of reduced growth rate and increased condemnation rate. The major factor responsible for the pathogenicity of Clostridium perfringens is alpha toxin.

The aim of the present study was to prepare a Clostridium perfringens alpha Toxoid vaccine for the control of 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 titers elicited by vaccination were measured by toxin neutralization test, ELISA, and challenge test. It was revealed that the antibody titers expressed in international antitoxin units per ml were 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 was concluded that the use of Clostridium perfringens alpha Toxoid with the recommended dose of 48 MLD is able to protect turkey for 6 months.

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