Sex differentiation base on Multiplex-PCR techniques comparing with LH and FSH serum levels in vulturine Guinea fowl (Acryllium vulturinum)

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Objectives: Now a days the Guinea fowl breeding is increasing due to meat production and the bird showing so one of the most important factors for these attitudes the sex differentiation, after maturation the sex hormones detection is useful but it is necessary for making a relationship between molecular detection and hormones changes.

Materials & Methods: So in current study 18 vulturine guinea fowl were selected from a total population of 25 caged vulturine guinea fowls in the birds garden. They were labeled and some feathers and 5 ml blood were sampled of each bird for a Multiplex PCR and a serological ELISA test for FSH and LH

Results & Conclusion: Regarding to the results based on the PCR technique 6 of birds were female and the 12 birds were male. Meanwhile the mean LH and FSH levels in the females were of 0.4 mIU/ml, 0.1 mIU/ml respectively but these levels for the male birds were 1.8 mIU/ml, 0.1 mIU/ml respectively. The difference of FSH concentration between different sexes is justifiable and there was no differences in LH rate between different sexes.

Keywords: FSH, LH, Multiplex PCR, Vulturine Guinea Fowl, Sex Differentiation

Molecular detection of avian adenovirus in broiler flocks with inclusion body hepatitis (IBH), liver lesions and respiratory syndrome in Northeast Iran

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Objectives: Avian adenoviruses (AAV) are a very diverse group of pathogens causing a variety of asymptomatic and clinical presentations in poultry flocks. AAV have been associated with inclusion body hepatitis (IBH) and hydropericardium syndrome (HPS), respiratory disease, necrotizing pancreatitis, gizzard erosions and immunosuppression. Affected flocks may exhibit high mortality rates, liver damage, IBH/HPS and secondary infections due to immunosuppression. IBH/HPS has been reported as an economically important, emerging disease of broiler chickens in several countries. This preliminary study was conducted to molecularly detect avian adenoviruses in broiler flocks showing IBH, liver lesions and respiratory syndrome in Northeast Iran.

Materials & Methods: In total, 60 tissue samples were collected as follows: 20 samples from flocks suspected to IBH and liver lesions, 20 samples from flocks showing respiratory syndrome and 20 samples from clinically healthy flocks. DNA was extracted from liver, lung and hydropericardium fluid. Extracted DNA was subjected to PCR assay. PCR products were sequenced to confirm the identity of avian adenovirus. The nucleotide sequence data were analyzed using programs and services provided by NCBI.

Results & Conclusion: Five samples out of 20 samples collected from flocks with IBH (5 samples) or liver lesions (5 samples) and one sample out of 20 samples from flocks showing respiratory syndrome were positive. All samples collected from suspected IBH cases were positive, but samples from liver lesions were negative. None of the 20 samples from clinically healthy samples were positive. Based on sequence data adenovirus genome of Avian adenoviruses. This preliminary investigation do only confirms the presence of avian adenoviruses in clinical and histological syndromes, more works are needed. To our knowledge, this study might be the first report of Adenovirus infection in Iranian broiler flocks.

Keywords: Broiler, IBH, Avian Adenovirus