Prevalence of Avian Influenza H5N6 in Birds: A Systematic Review and Meta-analysis of Other Viral Zoonosis


ABSTRACT

Avian influenza viruses (AIV) are zoonotic pathogens that can potentially affect humans and potentially be epidemic in a region. Birds (such as poultry and wild birds) serve as potential reservoirs for these viruses, highlighting the importance of determining AIV prevalence in the avian population. No systematic reviews have been published on this issue in the world so far. The present systematic literature review following the PRISMA standard, with meta-analysis, used three databases to globally assess the Influenza H5N6 infection in birds (including poultry and wild birds). A model of random-effects meta-analysis was performed to calculate the pooled prevalence and 95% Confidence Interval (95% CI) for the prevalence of Influenza H5N6 infection in birds. A total number of 14,605 articles published from 2015 to 2020 were retrieved. After screening the abstract/title, 37 articles were selected for full-text assessment, and 15 were included for qualitative and quantitative analyses. Of the total number of birds (n = 13,416 birds), the pool prevalence by RT-PCR was 3.5% (95% CI: 2.8-4.3%). From the total, 39.67% of the birds assessed were ducks (family Anatidae), in which pool prevalence was 7.7% (95% CI: 4.4-11.0). In chickens (Gallus gallus domesticus), the pool prevalence was 3.3% (95% CI 1.9-4.8). Vietnam was the country with the highest pool prevalence; 7.9% (95% CI 4.0-11.7%). Bangladesh was the country with the lowest pool prevalence of 0.4% (95% CI 0.2-0.7%). A considerable proportion of infected birds tested positive highlighted the relevance of individual animals as reservoirs of H5N6. Ducks and chickens were found to be positive by RT-PCR in over 3% of the cases. These data suggest their relevance in maintaining zoonotic transmission and their potential implications for epidemics and even pandemics in the near future.

Keywords: H5N6, Influenza, Meta-Analysis, Molecular diagnosis, RT-PCR, Systematic Review

[Full text- PDF ] [XML] [Google Scholar]
482 human rabies deaths were recorded in Nepal during the study period. On average, 49
population management, and not merely the lack of PEP services. Hence, it is recommended
that the government agencies and other concerned stakeholders should organize mass
The PEP consumption and the number of human deaths were negatively correlated. A total of
2,102 people were bitten by mostly stray dogs. There was a gradual increase in PEP use
Post-exposure Prophylaxis in Nepal during 2008 to 2017

There were 252,297 dog bite cases in humans recorded between 2008 and 2017. Every month,
Research Paper

A Retrospective Study on Dog Bite Associated Rabies in Human and the Use of
[Full text-}

ABSTRACT

A Retrospective Study on Dog Bite Associated Rabies in Human and the Use of

Dog Bite Associated Rabies in Human and the Use of Post-exposure Prophylaxis in Nepal

ABSTRACT

Skliarov P, Fedorenko S, Naumenko S, Onyshchenko O, Pasternak A, Roman L, Lischchova M,
Biliy D, and Bobrytska O. (2021). Reviewing Effective Factors of Alimentary Deficiency in

ABSTRACT

Bonilla-Aldana OK, Toro-Ortiz C, Jimenez-Salazar P, Guzman-Manco V, Jimenez-Diaz SO, Bonilla-Aldana J,
Gutierrez-Grijalva EJ, Pecho-Silva S, Perri-Mendoza A, Salazar JA, Pachar MR, Martinez-Pulgarin DF,
Supplementation of Leaf Meal in Layer Chickens’ Feed: A Review

Moringa oleifera is very useful because its leaves are very nutritious. As a dietary supplement for animals, these areas is required to make full use of the potential advantages of the Moringa oleifera plant as layer feed.

Heat stress is a major challenge in livestock, affecting their performance, health, and reproduction. Studies have reported that heat stress reduced the viability of granulosa cells by inducing the expression of an apoptosis-related gene (P53) and compromised expression of a nonsignificant rate significantly decreased in heat stress group (25.1 ± 3.7). In addition, the viability rate decreased in heat stress (day 3). In conclusion, heat stress reduced the viability of granulosa cells by inducing the expression of an apoptosis-related gene (P53) and compromised expression of a nonsignificant rate significantly decreased in heat stress group (25.1 ± 3.7). In addition, the viability rate decreased in heat stress (day 3).


Production of Newcastle Disease Polyclonal Antibody as the Alternative of Immunohistochemistry Primary Antibody against Newcastle Disease in Poultry

Newcastle disease (ND) is the most pathogenic viral infection in poultry. The present study aimed to produce ND polyclonal antibody as the alternative of immunohistochemistry using Reverse Transcription Polymerase Chain reaction (RT-PCR). The result showed that 19/31 (61%) were positive against immunohistochemistry and RT-PCR and a total of 12/31 (39%) were negative. Based on the obtained results, immunohistochemistry using polyclonal antibody produced by vaccination in the rabbit could be used as the alternative of immunohistochemistry primary antibody for diagnosing ND in poultry.


Immunohistochemistry, Newcastle disease, Polyclonal antibody, Poultry, RT-PCR


Buffalo granulosa cells

Heat stress (40.5°C) for 2 hours

Heat stress (38.9°C) until day 7

Normal temperature (38.9°C) until day 7

Day of confluence (day 3)
Specific mutations clustering them into new subgroups (2A, 2B). By mutation analysis, all viruses in the group A and B. All Egyptian viruses in the current study had specific new egg production with an observed mortality rate ranging 5-15%. A total of 26 samples were viral replication, were observed in all viruses. The field viruses in the study were distinct from the current study was related to subgroup 2A. Moreover, Q139 and Q144 amino acid substitutions, which are important in continuously circulating in Egypt from different genotypes. It acquired new specific mutations.

**ABSTRACT**

Chicken Anemia Virus (CAV) is an extremely contagious immunosuppressive disease causing positive for CAV using PCR in six governorates in Lower Egypt with a 30% incidence rate, Flocks in Egypt during 2020 especially in Sharkia (78%), Ismailia (62.5%), and Alexandria (60%). The viral protein1 (VP1) gene of CAV was genetically characterized by sequencing of 10 selected viruses in six governorates in Egypt during 2020. They suffered from retard growth, weakness, and a drop in the vaccinal strains by phylogenetic analysis and A.A. identity. In conclusion, the CAV was from Nigeria, and India in group B. The Egyptian viruses in the current study acquired new mutations and new amino acid substitutions which are related to the hypervariable region such as Y134, V143, V144, Q139, F142, Y146, and P210.

**Keywords:** CAV, Egypt, VP1, phylogenetic analysis

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**Role of elastin in the thickening of the postpartum vaginal wall**

Elastin levels were significantly correlated with epithelial thickness.

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**Chicken anemia virus**
This study was conducted to observe the influences of essential lysine on the content of Omega-3 and Omega-6 if the feed that is used in the cultivation process, contains lysine as an amino acid source. Patin catfish need essential amino acids to meet their needs. The addition of the amino acid (lysine) in the commercial feed not only affects the metabolism of the fish but also the content of Omega-3 and Omega-6.

Keywords: Lysine, Patin catfish, Omega-3, Omega-6.
Effect of Lysine Supplementation in Commercial Feed on Energy Retention and Feed Conversion Ratio of Carp (Osphronemus gouramy).

**ABSTRACT**

The addition of lysine up to 2.5% in feed does not reduce the feed conversion ratio in carp. One way to accelerate the growth of this fish is to shorten the maintenance period. The research was conducted to determine the influence of lysine supplementation in feed on energy retention and feed conversion ratio of carp. The treatment used was the addition of lysine 0%, 1%, 1.5%, 2%, and 2.5% to the feed. The present experiment was conducted for a year. The results indicated that the use of lysine has different effects related to the increase in feed conversion ratio. It can be concluded that the use of lysine has different effects related to the increase in feed conversion ratio. The aim of this study was to determine the influence of lysine addition on energy retention. Therefore, the research was conducted to determine the influence of lysine addition on energy retention. The research was conducted for a year. The results indicated that the use of lysine has different effects related to the increase in feed conversion ratio. Therefore, the research was conducted to determine the influence of lysine addition on energy retention.

**Keywords:** Conversion ratio of carp, Energy retention, Lysine

**References**

The Grass Was Greener - Climate Change, One Health, and the High Hopes to Mitigate


The Grass Was Greener - Climate Change, One Health, and the High Hopes to Mitigate COVID-19, Asian Influenza, and other Zoonotic Emerging Diseases.