Cairo University
Faculty of Veterinary Medicine
Dept. of Microbiology

كلية الطب البيطري
جامعة القاهرة

Effect of Bacterial Proteolytic enzymes on Virulence and Pathogenicity of Avian Influenza Virus

A Thesis Presented By
Sherein Galal Mohamed Khoulosy
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Under the Supervision of

Prof. Dr. Salah El-Dein Abdel Kareim Selim
Professor of Microbiology
Faculty of Veterinary Medicine
Cairo University

Prof. Dr. Ahmed S. Shehata
Professor of Microbiology Faculty of Veterinary Medicine
Cairo University

Prof. Dr. Soad A.A. Abdel Wanis
Chief Researcher of Poultry Diseases
Animal Health Research Institute

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Department of Microbiology

Name: Sherein Galal Mohamed Khoulosy

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Supervisors :
Prof. Dr. Salah El-Dein Abdel Kareim Selim , Professor of Microbiology, Dept. of Microbiology, Faculty of Veterinary Medicine, Cairo University
Prof. Dr. Ahmed Samir Shehata
Professor of Microbiology, Faculty of Veterinary Medicine , Cairo University
Prof. Dr. Soad Abdel Aziz Abdel Wanis
Chief Researcher of Poultry Diseases, Animal Health research Institute

Abstract

Two thousands cloacal swabs were collected from 100 poultry farms showing respiratory and diarrheic sings. All samples were examined bacteriologically for isolation of *E.coli* & *Salmonella*. The results revealed detection of *Salmonella* in 31 farms out of 100 examined farms with percentage 31%. Isolation of *E.coli* was carried out and the results revealed isolation of *E.coli* from 67 farms with percentage 67% of examined 100 poultry farms. Detection of the proteolytic enzymes produced by bacterial isolates was done using Protease Agar Casein Assay. All collected samples were examined for detection of Avian Influenza viruses using RRT–PCR. HPAI (H5N1) virus was detected in 10 farms while LPAI (H9N2) was detected in 31 farms out of 100 examined farms. Effect of co-infection with HPAI & LPAI and proteolytic bacteria (*Salmonella Enteritidis* and *E.coli* O158) was carried out in SPF chicken. Morbidity and mortality were recorded as well as re-isolation and virus shedding were done

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