Incidence of pigeon's infectious coryza in a farm in Bahrain and the associated risk factors

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Background: A targeted investigative survey was conducted in a chicken farm in Bahrain with 17 pigeons due to owner complain that two pigeons died from respiratory disorders and edema of the faces and wattles. Infectious coryza is a worldwide cosmopolitan acute upper respiratory disease of chickens involving pigeons caused by the pathogen *Avibacterium haemophilus paragallinarum*. It is an infectious chicken disease primarily affecting upper respiratory tract usually resulting in marked economic losses as reduction of egg production and losses particularly on multi-age farms. Facial swelling, lacrimation, nasal discharges, anorexia represent the most dominant clinical symptoms of the disease.

Material & Methods: Physical examination of the sick pigeons and the post mortem findings of freshly dead two birds showed subcutaneous edema in the face and wattles, conjunctivitis and catarrhal inflammation in nasal sinuses and passages. A total number of 17 pigeons were tested of which 6 (35.3%) were found showing variable clinical signs of upper respiratory disorders. Sterile cotton swab samples were collected perfectly from the infra-orbital sinuses and trachea of the six clinically sick pigeons. A total of 15 sterile samples were obtained from the clinically sick pigeons. These sterile cotton swab samples were used for the microbial cultural examination on (5-10%) sheepblood agar and chocolate agar with TM/SN medium. The swab samples were also preserved in a Glycerol Phosphate Buffered Saline (G-PBS) in the laboratory.

Results: Infectious coryza's confirmatory diagnosis is usually performed by the typical clinical manifestations, cultural demonstration of specific colonies and biochemical tests in the developing countries, although the PCR molecular diagnosis is the accurate basis of the disease diagnosis. The microbial cultures resulted in a typical short rods mucoid, rough colony, dew drop like morphological feature of the organism was shown in seven samples (46.7%). Antibiotic sensitivity test was performed for the isolates with 5 different broad-antibiotics commonly used locally for poultry industry in Bahrain. The sensitivity testing showed variable sensitivity reactions to the chosen antibiotics as gentamicin (87.2%), chloramphenicol (86.3%), ampicillin (85.9%), doxycycline (82.6%) and streptomycin (79.2%) respectively.

Discussions & Conclusion: This is the first study on the incidence and prevalence of infectious coryza in Bahrain poultry farms, so it is recommended the necessity of further field farms level surveys. Infectious coryza is an acute respiratory infection in chickens characterized by high morbidity (35.3%), but low mortality rates (11.7%) as shown in this survey. Chicken ages, farm management system and prophylactic drugs used were seen factors of variable impact on the disease situation in Bahrain.

Recent Publications

1. Abdalla Fadlalla Azrug and Ayse Burgu (2011) Deve Parazitlerine Genel Bakis ve Turkiye'deki Durum. Turkiye Parazitol Derg 2011, Vol (35):57-60. Ankara, Turkey.
2. Abdalla Fadlalla Azrug (2016) Dromedary Camel Parasites of Economic Importance in the Middle East. XXV National Congress of Veterinary Parasitology and National Symposium on "One Health Approach – Plausible Solution for Sustainable Parasites Control". Compendium. Madras Veterinary College, Chennai, Tamil Nadu Veterinary and Animal Sciences University, Chennai, India Congress book, pp: 56.
3. Abdalla Fadlalla Azrug, et al., (2016) Epidemiological Studies on Nematode Helminthes in Horses from Different Management Systems in Bahrain. 2nd International Conference on Parasitology, 1-3 August 2016, Manchister, UK, Conference book, pp:32.

Biography

Abdalla Fadlalla Azrug has completed his PhD in Veterinary Helminthology at the Department of Parasitology, Faculty of Veterinary Medicine, Ankara University, Turkey in 2011. He was the Director for two regional veterinary research laboratories in West Sudan from 1999-2012. Currently, he is the Manager of the Central Veterinary Laboratory, Agriculture and Marine Resources Affairs, Manama, Bahrain, a governmental diagnostic and research laboratory in the veterinary services sector. He has published more than 15 papers in reputed journals and scientific international conference books participating in many international conferences related to the field of veterinary science and one health. He acted in the position of OIE Delegate for Kingdom of Bahrain from 2014 -2017.

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