

Clinical and Serological Observation of the Newcastle Disease on Commercial Meat Chicken Flocks in Basrah Province, South of Iraq

Karrar Haider Abedali¹, Harith Abdulla Najem², Sara Salim Mohammad³

¹Veterinarian private clinic

²Department of Pathology and Poultry diseases, College of Veterinary Medicine, University of Basrah

³Department of Veterinary Public Health, College of Veterinary Medicine, University of Basrah

ABSTRACT: The current study was conducting to observed Newcastle Disease (ND) in Basrah and evaluated the competence of vaccination schedules used in commercial meat chicken farms. Monitoring of ND was dependent on 20 poultry houses located in Al Zubair, Al Mudaina, Al Qurnah, Garmat Ali Safwan, and Aluhais. The Incidence was recorded based on the clinical history of the disease in the poultry house, clinical signs, and post-mortem findings. ELISA test was estimated to detect Ab titer against ND, including maternal immunity and immune state after vaccination. The results indicated that the Incidence of ND was 80%. ND was not recorded in 20% of poultry houses. Results of the ELISA test showed differences of Ab against ND at different ages of birds, especially at a late stage. Ab titers were very low. The mean of maternal-derived antibodies was 6000 in Belgian, 308 Rose and 2000 for Iranian 501 coop. On the other hand, ND vaccines, available in local markets, showed a good quality (Ma5 + Clone 30) compared with different types, especially (lasota + IB) Henkar. **Published Online: July 22, 2024**

KEYWORDS: Clinical , serological , observation, ND, chicken

Corresponding Author:
Sara Salim Mohammad

INTRODUCTION

Newcastle disease (ND) is regarded as a worldwide disease and one of the critical virulence diseases of poultry (1). The high mortality rates of bird flocks caused by ND Virus (NDV) infections result in destruction and economic consequences such as trading restrictions and embargoes imposed on affected areas and nations (2). Due to the severe nature of the disease and its resulting repercussions, ND is classified as a List A disease by the Office Internationale des Epizooties (OIE) (3). As a result, most nations, including all European Union countries, implement mandatory control measures in the event of disease outbreaks (4). However, Newcastle Disease (ND) is endemic in some areas of the world and continues to pose a persistent risk to most domestically raised birds (5). Since its recognition in 1926, Vaccination against ND has been practised in almost all countries producing commercial poultry. A widely accepted practice is vaccination with attenuated strains of NDV. As the live attenuated virus in the vaccine is infectious, the vaccine itself may be a source of infection in unimmunized chicks.

Moreover, vaccination with a live virus has specific side-effects, such as adverse reactions that can be avoided using an inactivated vaccine.

Further, inactivated virus vaccines stimulate high levels of long-duration immunity (6). The poultry business in Iraq has a substantial economic impact and encompasses many species of chickens. The disease continues to be a persistent issue in chicken farms. Therefore, this study aimed to monitor the ND incidence to determine the types of vaccines and vaccination schedules used in Basra poultry houses.

MATERIALS AND METHODS

Study area and clinical monitoring

This study was carried out in Basrah province, located in south Iraq. The study duration was eight weeks, starting 1 Juli 2023 and continuing until Aug 30 2023. A total of 20 poultry houses were visited, located in al Zubair, al Mudaina, al Qurnah, Garmat Ali, Safwan and aluhais. The monitoring depended on many parameters, including the clinical history of the disease that was received by conducting direct interviews with farmers, in which we recorded answers to our questions. The questions were about