

INTISARI

STUDI LESI MAKROSKOPIS DAN MIKROSKOPIS EMBRIO AYAM YANG DIINFEKSI VIRUS *NEWCASTLE DISEASE* ISOLAT AYAM PETELUR SALATIGA

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Newcastle disease (ND) disebabkan oleh *Avian paramyxovirus* dari keluarga *Paramyxoviridae*, merupakan salah satu penyakit utama pada ayam. Penelitian ini bertujuan untuk mengetahui lesi pada organ embrio ayam secara makroskopis maupun mikroskopis yang diinfeksi oleh virus ND.

Telur ayam berembrio (TAB) diinokulasi oleh virus ND Salatiga dan virus ND *La Sota*. Aquabidestilata digunakan sebagai kontrol negatif. TAB yang menunjukkan kematian embrio disimpan di *refrigerator*, kemudian dikoleksi cairan allantoisnya. Embrio ayam yang mati dilakukan pengamatan secara makroskopis. Organ dari embrio ayam dibuat preparat histopatologi dengan pewarnaan *Hematoxyline* dan *Eosin* (H&E) untuk pemeriksaan mikroskopis. Identifikasi adanya pertumbuhan virus ND pada isolat dilakukan dengan menggunakan uji hemaglutinasi dan uji hemaglutinasi inhibisi menggunakan serum anti ND.

Embrio ayam yang diinfeksi oleh virus ND Salatiga mengalami kematian kurang lebih 26 jam pasca inokulasi. Lesi makroskopis yang teramati berupa hemoragi pada kulit. Lesi mikroskopis menunjukkan adanya kongesti dan hemoragi pada paru-paru, kongesti dan radang pada kulit, serta kongesti pada usus, hati, ginjal, dan jantung. Embrio ayam yang diinfeksi virus ND *La Sota* secara makroskopis teramati kongesti ringan pada kulit. Lesi mikroskopisnya menunjukkan adanya kongesti pada paru-paru, kongesti dan radang pada kulit, serta kongesti pada hati, ginjal, dan jantung. Lesi makroskopis dan mikroskopis embrio ayam yang diinfeksi virus ND Salatiga lebih parah bila dibandingkan dengan lesi akibat virus ND *La Sota*.

Kata kunci: *Newcastle disease*, embrio ayam, lesi makroskopis, lesi mikroskopis.

ABSTRACT

A STUDY ON MACROSCOPIC AND MICROSCOPIC LESIONS OF CHICKEN EMBRYOS INFECTED BY *NEWCASTLE DISEASE ISOLAT* VIRUS OF SALATIGA HENS

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Newcastle disease (ND) is caused by *Avian paramyxovirus*, family *Paramyxoviridae*, one of the major diseases in chickens. This research aimed to find lesions in chicken's embryo organs macroscopically and microscopically, infected by ND virus.

Embryonic chicken eggs (ECE) were inoculated by the ND Salatiga virus and ND *La Sota* virus. Aquabidestilata used as a negative control. ECE that showed the death of the embryos, stored in the *refrigerator*. Then, the allantois fluid collected. Chicken embryos that died then observed macroscopically. The organs of chicken embryos were made into histopathologic preparations stained with *Hematoxylin* and *Eosin* (H&E) for microscopic analysis. The identification of ND virus growth on isolates was done by haemagglutination and haemagglutination inhibition test using an anti-ND serum.

The chicken embryos that were infected by the ND Salatiga virus died approximately 26 hours post-inoculation. Macroscopic lesions were visible as haemorrhage in the skin. Microscopic lesions indicated the congestion and haemorrhage in lungs, inflammation and congestion in the skin, congestion in intestines, hepar, kidneys and cor. Observed macroscopically, there was mild congestion on the skin in chicken embryos infected by ND *La Sota* virus. The microscopic lesions showed congestion in lungs, hepar, kidneys and cor, also the inflammation and congestion on the skin. The macroscopic and microscopic lesions of chicken embryos infected by the ND Salatiga virus were more severe than lesions caused by ND *La Sota* virus.

Key words: *Newcastle disease*, chicken embryos, macroscopic lesions, microscopic lesions.