

INTISARI

ISOLASI DAN IDENTIFIKASI *FOWLPOX VIRUS* ISOLAT LAPANGAN BERDASARKAN UJI *IN OVO*

Nuri Rahma Nuranisa
17/409267/KH/09268

Fowlpox merupakan penyakit infeksius yang disebabkan oleh *fowlpox virus* (FWPV). *Fowlpox* menyebabkan kerugian ekonomi berupa penurunan produktivitas, tingkat fertilitas rendah, pertumbuhan lambat dan peningkatan mortalitas. Gejala penyakit *Fowlpox* dapat terjadi dalam beberapa bentuk yaitu kutaneus, diferitik, dan sistemik. Karakteristik lesi *fowlpox* bervariasi pada *chorioallantoic membrane* (CAM). Penelitian ini bertujuan untuk mengisolasi dan mengidentifikasi FWPV berdasarkan uji *in ovo* dari ayam yang menunjukkan gejala *fowlpox*.

Sampel penelitian diambil dari lima ekor ayam dari daerah Wedi, Klaten, Jawa Tengah yang menunjukkan gejala *fowlpox* bentuk kutaneus ditandai dengan adanya lesi nodular pada kepala dan leher serta bagian kulit yang tidak berbulu lainnya seperti badan, bawah sayap, dan dada. Gejala lain yang dapat diamati yaitu ayam lemah, pucat, kurus, kotor dan bulu terlihat kusam. Seluruh sampel dikumpulkan (*pooled*) menjadi satu isolat virus kemudian diinokulasi secara *in ovo* melalui CAM telur ayam berembrio *specific pathogen-free* (SPF) dan diinkubasi pada suhu 37°C selama lima hari. CAM *passage* pertama yang menunjukkan perubahan makroskopis selanjutnya dilakukan pengamatan secara histopatologis.

Lesi makroskopis yang muncul dari hasil uji *in ovo passage* pertama berupa pembentukan lesi *pock* berbentuk nodul berwarna putih buram, menonjol, berbentuk bulat dengan diameter 0,5 - 1 mm disertai penebalan pada CAM. Lesi mikroskopis yang teramati berupa adanya badan inklusi intrasitoplasmik pada sel epitelial kulit dan CAM, infiltrasi sel radang, hemoragi, dan hiperplasia. Berdasarkan gejala klinis, lesi makroskopis dan lesi mikroskopis dapat disimpulkan bahwa FWPV penyebab *fowlpox* terisolasi dan teridentifikasi pada sampel lapangan.

Kata kunci: *Fowlpox virus*, isolasi, identifikasi, *in ovo*.

ABSTRACT

ISOLATION AND IDENTIFICATION OF FIELD ISOLATES FOWLPOX VIRUSES BASED ON IN OVO TEST

Nuri Rahma Nuranisa
17/409267/KH/09268

Fowlpox is an infectious disease caused by fowlpox virus (FWPV), which causes economic losses in the form of decreased productivity, low fertility rates, slow growth, and increased mortality. Symptoms of fowlpox disease can occur in several forms, namely cutaneous, diphtheritic, and systemic. The characteristics of the fowlpox lesion vary on the chorioallantoic membrane (CAM). This study aims to isolate and identify FWPV in ovo from chickens showing fowlpox symptoms.

The research sample was taken from five chickens from Wedi, Klaten, Jawa Tengah showing symptoms of cutaneous fowlpox, characterized by nodular lesions on the head and neck as well as other hairless skin parts such as the body, under the wings, and chest. Other symptoms that can be observed are weakness, pale, thin, dirty and dull-looking feathers. All observed samples were pooled into one virus isolate and then inoculated in ovo via CAM of specific pathogen-free (SPF) embryonic chicken eggs and incubated at 37° C for five days. First passage CAM which showed macroscopic changes then performed histopathological observations.

Macroscopic lesions that arise from the results of first passage in ovo test are the formation of pocks lesions in the form of opaque white, prominent, round nodules with a diameter of 0.5 - 1 mm accompanied by thickening of CAM. Microscopic lesions were observed in the form of intracytoplasmic inclusion bodies on CAM epithelial cells and skin, infiltration of inflammatory cells, hemorrhage, and hyperplasia. Based on clinical symptoms, macroscopic lesions, and microscopic lesions it can be concluded that the presence of FWPV causes fowlpox has been isolated and identified in field samples.

Key words: Fowlpox virus, isolation, identification, in ovo.