

## INTISARI

### ISOLASI DAN KARAKTERISASI *Avibacterium paragallinarum* PADA PUYUH (*Coturnix coturnix japonica*) YANG MENUNJUKKAN GEJALA SNOT DI PT. PEKSI GUNARAHARJA DI KALASAN

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*Infectious coryza* atau *snot* adalah penyakit yang menyerang saluran pernafasan bagian atas pada unggas, termasuk puyuh yang disebabkan oleh *Avibacterium paragallinarum*. Gejala klinis *snot* antara lain pembengkakan pada daerah fasial, leleran dari sinus nasalis dan berbau busuk, lakrimasi. Di lapangan dilaporkan banyak puyuh yang menunjukkan gejala *snot* namun belum ada penelitian mengenai *snot* pada puyuh. Pertumbuhan *Avibacterium paragallinarum* membutuhkan faktor V/NAD yang diperoleh dari *Staphylococcus sp.* yang mengikuti bersama bakteri tersebut. Penelitian ini bertujuan untuk mengisolasi, mengidentifikasi *Avibacterium paragallinarum* dan mengetahui prosentase serta sifat *dependent Avibacterium paragallinarum* yang ditemukan pada puyuh terdiagnosis *snot*.

Penelitian ini menggunakan sembilan ekor puyuh yang menunjukkan gejala *snot* yang berasal dari peternakan puyuh PT. Peksi Gunaraharja di Kalasan. Leleran dari sinus nasalis ditanam pada plat agar coklat (PAC) diinkubasi dengan suhu 37°C selama 24 jam di dalam *candle jar*. Selanjutnya dilakukan pengamatan morfologi koloni dugaan, pengecatan Gram, dan uji biokimia (uji katalase, oksidase, urease, pepton serta fermentasi karbohidrat: maltosa, manitol, laktosa dan sorbitol). Untuk mengetahui terbentuknya koloni satelit maka dilakukan kultur *Staphylococcus sp.* pada media plat agar darah (PAD) yang sudah dikultur dengan *Avibacterium paragallinarum*.

Hasil penelitian menunjukkan 5 isolat dari 9 isolat (55,5%) teridentifikasi *Avibacterium paragallinarum* dengan karakteristik Gram negatif berbentuk kokobasil, non motil, katalase negatif, oksidase negatif, produksi indol dan urease negatif. Dalam fermentasi karbohidrat terdapat perbedaan yaitu 3 isolat (60%) dapat memfermentasi keempat karbohidrat sedangkan 2 isolat (40%) bersifat variabel untuk fermentasi laktosa. Hasil penanaman pada media plat agar darah (PAD) dengan *Staphylococcus sp.* tidak terbentuk koloni satelit. Hal ini menandakan bahwa isolat yang berasal dari puyuh di peternakan Kalasan tidak tergantung terhadap NAD (*NAD-independent*). Kesimpulan dari hasil penelitian ini adalah tidak semua puyuh yang menunjukkan gejala *snot* teridentifikasi *Avibacterium paragallinarum*.

Kata kunci: *Infectious coryza*, *Avibacterium paragallinarum*, *NAD-independent*, *Staphylococcus sp.*

## ABSTRACT

### ISOLATION AND IDENTIFICATION OF *Avibacterium paragallinarum* FROM QUAILS SHOWN SYMPTOMS SNOT IN PEKSI GUNARAHARJA COMPANY THE FARM QUAILS IN KALASAN

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Infectious coryza (also known as snout) is highly infectious disease of chickens/fowl, including quail, characterized by catarrhal inflammation of the upper respiratory tract, especially nasal and sinus mucosae. The other symptom can be found in infected animals are excessive lacrimation and stinky nasal mucus. Reports that this snout disease attacks quails, is already proven in real life. But the research of this disease has not been done to a quail yet. The growth of *Avibacterium paragallinarum* need V-factor that produce by *Staphylococcus sp* that growth with *Avibacterium paragallinarum*. The purpose of this research is to isolate, identify *Avibacterium paragallinarum*, and to determine the percentage with dependence characteristic of *Avibacterium paragallinarum* found in infected quail.

This research uses nine quails (that show the symptoms) derived from the quail farms Peksi Gunaraharja company in Kalasan. The nasal mucus was planted to PAC with then incubated for 24 hours in a 37°C candle jar. The next processes are observation of colony morphology, Gram staining, biochemistry test (catalase test, oxidase, urease, peptone and fermentation of carbohydrates such as maltose, mannitol, lactose and sorbitol and *Staphylococcus sp.* addition to identify the forming of the colony.

The result of this research shows that the bacteria *Avibacterium paragallinarum* has the characteristics: Gram negative, coccobacillus shaped, non motile, catalase negative, oxidase negative, indole and urease production negative. Based on the research, there are 5 out of 9 isolates (55,5%) has been identified infected by *Avibacterium paragallinarum*. There are some difference to fermented carbohydrate, three isolates (60%) can fermented all carbohydrate and two isolate (40%) are variable to fermented lactose. The addition of *Staphylococcus sp.* is necessary to keep the PAD from forming the colony satellitism. This prove that the isolates from the quail farm in Kalasan are not depends to NAD (NAD-independent). The conclusion of this research is quail that shows the snout symptoms can possibly uninfected by *Avibacterium paragallinarum*.

Keywords: Infectious coryza, *Avibacterium paragallinarum*, NAD-independent, *Staphylococcus sp.*