INFECTIONOUS SEROSITIS IN DUCKLINGS DUE TO
PASTEURELLA ANATIPSEIFER INFECTION

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SUMMARY

In the early 1982, more than one thousand ducklings located in three different location of duck farms in South Sulawesi Province were reported died mostly within 24 hours after the clinical signs were observed. The most prominent lesions were acute fibrinous hepatitis, fibrinous pericarditis, spleenitis and airsacculitis. Pasteurella anatipe stifler was purely isolated from the sinus, lung, heart blood, brain, spleen dan air sac.

The clinical signs, pathogenesis and pathological lesions similar to one which has been reported by previous investigators.

INTRODUCTION

Infectious serositis or "New Duck Disease" in ducklings due to Pasteurella anatipe stifler was first described by Hendrickson and Hibbert on Long Island, New York in 1932 (Daugherty, et al. 1935). The disease is characterized pathologically by pericarditis, pericarditis, and cerebrospinal meningitis. Problems resulting from anatipe stifler infection was considered to be the most economically important affecting duck industries in the United States. The morbidity and mortality rate is high among ducklings, but older ducks appears to be more resistant to infection (Daugherty et al., 1932).

The etiologic agent was finally isolated and characterized as a genus Pfeifferella (Hendrickson and Hibbert, 1932), but later workers have called it as Monacelle anatipe stifler (Bräuer and Fabrettila, 1954), however it was listed under P. anatipe stifler in the Bergey's Manual of Determinative Bacteriology (Smith, 1974).

The disease has been reported in some different countries in the world such as England, United States, Canada, the Netherlands, Soviet Union and Australia (Hillenbrand and Rhodes, 1972, Rosenfeld, 1973). The purpose of the present paper is to report a natural case of infectious serositis due to \textit{P. anatipe stifler} in Indonesia.

CLINICAL HISTORY

In the early 1982, more than one thousand ducklings (Khaki Campbell) in three different locations of duck farms in South Sulawesi Province, Indonesia, were reported died. The birds usually died approximately 24 hours after the clinical signs were observed. The disease was then rapidly spread among ducklings in the same flock. Clinical signs included loss of appetite, coughing, sneezing, diarrhea and watery discharge from the eye and nose. In some cases there were signs of ataxia tremor and torticollis. Swell of the infra orbital sinuses were observed in several ducks. Mortality rate range from 5 to 75%.

DAFTAR PUSTAKA


\textsuperscript{1} Bagian Pendidik BPPH vd VII Ujung Pandang
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MATERIALS AND METHODS

Necropsy was performed on 17 birds included dead and live ducklings of which were submitted to the laboratory of Animal Disease Investigation Center. The birds were 1 to 4 weeks old at necropsy. Tissues included liver, trachea, lung, spleen, kidney, gizzard, intestine, sinus and brain were fixed in 10% buffered formalin for histological preparation. In addition, liver, brain, spleen, lung, blood from the heart and swab swabbing from the sinuses were submitted for bacteriological examination.

RESULTS AND DISCUSSION

The most prominent gross lesions were fibrous purulent exudation of the serosal surfaces of most of internal organs mainly liver, heart, spleen and air sac. The liver was swollen, dark or yellow in color with some fibron on the surface. The pericardium and air sac were thickened and whitish in color.

Histologically, there were acute fibrinous hepatitis, fibrinous pericarditis, splenitis and air sacculitis. Inflammatory cells mainly heterophil were prominently seen on the serosal surfaces of the liver, gizzard, intestine, spleen, pancreas and air sac. Purulent interstitial pneumonia and sinusitis or hemorrhagic submucings were observed in several ducklings.

The clinical signs, pathogenesis and pathological findings of the disease similar to one which has been reported by others (Daughtery, et al. 1955, Graham, et al. 1938, Hendrickson and Hibbert, 1932). The observation was definitely confirmed by isolation of P. anastomosis with greatest frequency recovered from the sinus (71.4%), lung (64.7%), heart blood (54.4%), brain (50%), spleen (35.4%), liver (23.3%) and air sac (27.2%). The organism was identified based on the morphological and colony growth characteristics, gram staining, sugar fermentation study and serological reaction. This is the first report of P. anastomosis infection in ducklings in Indonesia.

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RINGKASAN


REFERENCES