

CRONIC NECROTIC HEPATITIS AND BRONCHOPNEUMONIA IN JAVAN GIBBON

Sulistiwati E¹, Masnur I², Joko Pamungkas²

¹Primate Research Center, Bogor Agricultural University

²Javan Gibbon Center, West Java

Clinical History

A 73-year-old, female. Javan Gibbon (*Hylobates moloch*) was found death without any clinical signs and sent to Primate Research Center to have pathology anatomy evaluation. Based on the owner's information, she had negative result of the last TB test, and animal was moved to another cage one month before death. Recently body weight was 6600 gram.

Clinical Diagnosis

Unknown

Gross Findings

Grossly, mucous membrane of nasal cavity was reddish. Left diaphragm lobes of lungs was dark red. There was a mass which attached to diaphragm, with size 4 cm in diameter, slightly hard in palpation and contained of turbid, red to yellowish fluid. Liver had diffuse yellowish spots with the size 2 - 4 mm in diameter throughout the whole organ, the cut section was dry. Mucosal stomach was reddish. The left ventricular of the heart appeared to dilated and double apex. Posterior and anterior portal vein were also dilated. Uterus was reddish. Both enlarged kidneys were pale. The dark red spleen appeared enlarged with dry incision. Lymph node appeared slightly enlarged.

Histopathological Findings

Liver had multifocal to diffuse, coagulative necrosis mixed with eosinophilic protein material. Sinusoid was dilated, most of nucleus of hepatocytes became pycnotic and found some aggregation of basophilic organism. Accumulation of dark brown material in perivascular vein of the portal triad (Dx: moderate, diffuse, chronic, necrotic hepatitis with bacteria intralésio; moderate hepatic hemosiderosis). Lungs. About 80% of the structure section was replaced by multifocal to diffuse necrosis nests with some debris cells, mononuclear inflammatory cells and macrophages. Some of vascular and alveoli consisted of long, smooth material like hyphae

and basophilic organism material. Local septum of alveoli were thickened by protein material accumulation mixed with mononuclear inflammatory cells and large number of small basophilic organisms. Some of alveoli consisted of homogenous protein material (severe, multifocal to diffuse, chronic, necrotic bronchopneumonia with bacteria and fungus intralésio). Karyomegaly on cardiac muscle. Uteric vein and ovary vascular consisted of erythrocytes and multifocal hemosiderin pigment (hemosiderosis). Endometrium formed late secretory phase, characterized by a saw-tooth appearance and basal vacuolation of the cells. Both of submucosal in the large and small intestine were extended and consisted of lipocytes and small number of homogenous eosinophilic protein material.

Laboratory Results

- Giemza staining method
Showed accumulation of erythrocyte and polymorphonuclear cell were detected in necrosis lesion of lungs smear by the Giemza staining method.
- Ziehl Nielsen . Negative

Discussion

Based on gross findings and histopathological evaluation revealed chronic diffuse necrotic hepatitis and diffuse chronic necrotic bronchopneumonia as a major cause of animal death. Hepatitis might present earlier than pneumonia and these findings were directing more to chronic transformation of disease process. Those lesions were more associated to viral infection with some secondary infection due to bacteria and fungus. Etiological diagnosis confirmation must be performed by viral and bacterial isolation by serological examination, and bacterial culture with specific bacterial staining. Unfortunately the confirmation test were not performed. Differential etiological diagnoses for pneumonia in non human primate should be considered mycological infection with further histological diagnosis confirmation required specific mycological staining. Other

changes such as hemosiderosis commonly was related with bleeding or red blood cells destruction around lesion area as a physiological mechanism.

References

Banister BA., Begg NT., Gillespie SH. 2000. Infectious of the liver in Infectious Disease. Second Edition. Blackwell

Science. 191-214.
Kelly WR. 1985. The liver and biliary system in Jubb KVF, Kennedy PC, Palmer N, editor. Pathology of domestic animal. Four edition. New York. Academic Press
McGavin MD. 2005. Liver, Biliary System and Exocrine Pancreas in Pathologic Basis of Veterinary Disease. Four Edition, 393-418