Hjäree’s disease in a Hyacinth macaw (Anodorhynchus hyacinthinus)

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Introduction and objectives
Hjäree’s disease (coligranuloma) was first described by Hjäree and Wramby (1945) as a relatively rare disease of domestic chicken [1]. The disease was characterized by nodular granulomas in liver, mesentery and walls of domestic chicken. The disease was characterized by Hjäree and Wramby (1945) as a relatively rare disease of Hjäree’s disease (coligranuloma) was first described by Hjäree’s disease appears to be a very rare disease, reported only occasionally in poultry and bird. The pathogenesis is unknown. The route of infection seem to be gastrointestinal, respiratory tract or skin. The predisposing causes in poultry were suggested limiting feed intake, vitamin A deficiency, hot weather and parasitic infestation as a stress factor. This macaw might be stress from the mentioned causes like in chicken. In addition, E. coli in this case seem to highly resist to antibiotics, except for gentamicin. This may indicate the virulence factor of bacteria. Differentiation of the case to the Chamydophila sp. infection was no lung lesion. Avian tuberculosis is the most common in captive birds. The tuberculous granuloma is similar to that of coligranuloma, but they can be differentiated by acid fast stain, which is negative for E. coli. Lesions of colibacillosis, a subacute form of E. coli infection, as a fibrinopurulent pericarditis, airsacculitis and peritonitis were not found in this macaw. Coligranuloma commonly present in the intestinal tract and liver of poultry but not in the spleen. In case reports of a common buzzard and an Amazon parrot demonstrated widely dissemination on spleen and pancreas[1,2]. This macaw present the lesion in the brain. Until now, there was no report of brain coligranuloma in avian species. This case appeared to be the first reported case of coligranuloma in the brain.

Discussion
Hjäree’s disease appears to be a very rare disease, reported only occasionally in poultry and bird. The pathogenesis is unknown. The route of infection seem to be gastrointestinal, respiratory tract or skin. The predisposing causes in poultry were suggested limiting feed intake, vitamin A deficiency, hot weather and parasitic infestation as a stress factor. This macaw might be stress from the mentioned causes like in chicken. In addition, E. coli in this case seem to highly resist to antibiotics, except for gentamicin. This may indicate the virulence factor of bacteria. Differentiation of the case to the Chamydophila sp. infection was no lung lesion. Avian tuberculosis is the most common in captive birds. The tuberculous granuloma is similar to that of coligranuloma, but they can be differentiated by acid fast stain, which is negative for E. coli. Lesions of colibacillosis, a subacute form of E. coli infection, as a fibrinopurulent pericarditis, airsacculitis and peritonitis were not found in this macaw. Coligranuloma commonly present in the intestinal tract and liver of poultry but not in the spleen. In case reports of a common buzzard and an Amazon parrot demonstrated widely dissemination on spleen and pancreas[1,2]. This macaw present the lesion in the brain. Until now, there was no report of brain coligranuloma in avian species. This case appeared to be the first reported case of coligranuloma in the brain.

Results
Macroscopically, the body condition of the bird was poor; the breast muscle were concave and decreasing of fat. The feathers were infested with many lice (Monopon sp.) and their eggs. Gross pathology revealed the presence of diffuse multifocal yellowish-white, necrotic lesions of variable sizes foci, 0.1-0.3 cm in diameter, at all lobes of liver and the enlarged spleen. The brain was found the 2 streaks of yellowish caseous lesion at the ventral part of the left parietal lobe including the pale yellowish white color at the right parietal lobe and left temporal lobe (Fig. A). The examination of tendon and joint of both legs revealed no remarkable lesions. The lungs were severe congested. Moderate diffuse catarrhal content was found in the intestine. The kidneys were swollen with pale yellowish color. Histopathology, the granulomatous lesions were typical granulomas with the central area of necrosis and/or pale blue staining bacterial colonies surrounded by a zone of massive inflammatory cell infiltration (Fig. B). The inflammatory cells were composed of lymphocytes, heterophils, macrophages and multinucleated giant cells. The granuloma present in the liver, spleen and brain. Fibrinohemorrhagic exudate and fibrinoid degeneration of blood vessels were present with demyelination in the brain. Mild degree of antracototic lung with congestion and catarrhal enteritis showed showed observed. The sciatic nerves and other visceral organs were no significant lesion. The Gram staining detected clusters of gram negative rod bacteria. PAS and acid fast staining were negative. Hemolytic E. coli was isolated from the liver sample, and drug sensitivity shown the resistant to ampicillin, enrofloxacin, norfloxacin, erythromycin, oxytetracycline, sulfadimetoxin and tetracycline. Gentamicin was an only sensitive antibiotic in this test.

References