

VEGETATIVE ENDOCARDITIS IN A BROILER CHICKEN

Vegetative endocarditis in birds was first described by Kernkamp in 1927. It is an uncommon lesion with an incidence generally below 0.5 per cent in poultry flocks (Jortner and Helmboldt, 1971). This condition was also reported from Assam by Dutta and Chakrabarti (2002). A case of vegetative endocarditis in a broiler chicken is presented in this paper.

A four-week-old broiler chicken maintained for nutritional trial at the department of Poultry Science was brought to postmortem examination, with a history of sudden death. On postmortem examination about 100 ml. of ascitic fluid was seen in the abdomen. The heart was flabby and enlarged. Upon incision an irregular, nodular, yellowish, friable vegetative mass about one cm. in diameter was found attached to the right atrio-ventricular valve (Fig.1). Few small vegetation of about 0.2 to 0.3 cm in diameter were also seen attached to the right ventricular endocardium. Hepatomegaly, splenomegaly and pulmonary congestion were the other lesions encountered. Squash preparation of the vegetative growth stained with Gram's stain revealed Gram positive cocci morphologically suggestive of staphylococcus. Coagulase negative staphylococcus species could be isolated from the mass on culture.

Microscopically a mass of eosinophilic necrotic and cellular debris were seen attached to the atrio-ventricular valve. Masses of bacterial colonies were evident (Fig.2). Severe heterophilic and moderate mononuclear infiltration were found in the myocardium along with myolysis of the myocardial fibres. Moderate congestion with multifocal bacterial emboli in the capillaries and heterophilic infiltration in the tertiary bronchi were found in the lungs. Thickened Glisson's capsule, hepatocellular necrosis, diffuse pericellular fibrosis, multifocal hepatitis and fatty changes were evident in

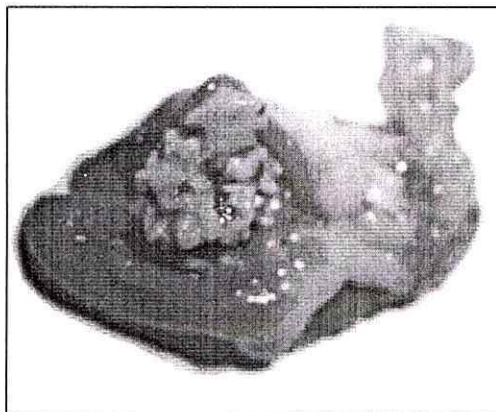


Fig.1. Vegetative mass attached to the atrio-ventricular valve



Fig.2. Necrotic and cellular debris attached to the right atrio-ventricular valve. Note the masses of bacterial colonies in the thrombi

the liver. Kidney showed mild degenerative changes. Spleen revealed the formation of secondary lymphatic follicles.

The gross and histopathologic findings in the present case were comparable to those described by earlier workers. *Staphylococcus* species isolated from the vegetation clearly indicated the involvement of this as the cause of growth at the valvular region

Enterococcus, *E.coli*, coagulase negative *Staphylococci*, *Klebsiella*, *Pasteurella* sps, *Enterobacter cloacae* and *Erysipelothrix rhusiopathiae* have been isolated by earlier workers (Isaza et al., 1992, Greenwood et al.,

1996 and Namee and King 1996). The impaired venous return resulting from the predominantly right-sided heart failure due to vegetation caused hepatomegaly and mild ascites. This observation was in agreement with Randall and Pearson (1991).

Observation of this type of lesion though rare warrants detailed examination of heart during necropsy.

Summary

A case of vegetative endocarditis in a broiler chicken is reported.

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