

HYDROPERICARDIUM SYNDROME



This disease
is known to
occur in
Afghanistan.



1. Definition

Hydropericardium syndrome is a recently emerged infectious disease of poultry characterized by fluid buildup around the heart, and often hepatic necrosis. It was first described in India and Pakistan and has since spread to other parts of the world. It has been popularly called “litchi heart” disease.

2. Etiology

The causative agent is fowl adenovirus, serotype 4, a member of the Genus *Adenovirus* in the Family Adenoviridae.

3. Transmission

The disease is contagious and the virus is transmitted horizontally by mechanical means and by contamination with infected feces. Humans may take the disease from one farm to another on contaminated clothing or equipment.

4. Species affected

Broilers in the 3 to 6 week age range are especially susceptible. Layers and breeders can also be affected, but morbidity and mortality are lower. Other poultry can also be affected, notably pigeons.

5. Clinical signs

Disease usually occurs suddenly. Incubation period is 5 to 17 days. Morbidity is high. Clinical signs are not specific. Birds are depressed

with ruffled feathers and may be partially recumbent with chest and beak resting on the ground. Mortality is up to 80% in broilers, but less than 10% in layers.

6. Pathologic findings

More than 90% of birds dying of this disease have an accumulation of straw-colored, jelly-like fluid in the pericardium. It is this appearance of the heart floating in jelly-like fluid that gave the name “leechy disease” or “litchi disease” because of the similarity to lichee fruit. Livers are often swollen, discolored, and friable. Urates are seen in kidneys, characteristic of severe dehydration. There may be thymic and bursal atrophy.

7. Diagnosis

Diagnosis on clinical signs is not possible. At necropsy, the presence of hydropericardium in multiple birds is highly suggestive. There are many serologic tests to confirm the diagnosis. Histopathology is also definitive, with prominent adenoviral intranuclear inclusions visible in multiple organs. Differential diagnoses are minimal; no other disease will cause this characteristic hydropericardium.

8. Treatment

There is no effective treatment.

9. Prevention and Control

Formalin-inactivated vaccines, made from infected liver homogenate or from cell cultures, have been shown to be effective, significantly reducing mortality. The vaccines will work in the face of a natural outbreak.

(photo, next page)



Hydropericardium syndrome - Heart is suspended in straw-colored, jelly-like fluid and liver displays extensive mottling.