INCLUSION BODY HEPATITIS OF CHICKENS

Slide study set #2

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Inclusion body hepatitis of chickens (IBHC) was initially described by Helmboldt and Frazier (1) in 1963 as an apparently rare condition of uncertain etiology. In the late 1960's the disease was recognized with increasing frequency in commercial flocks. Recent reports by Howell et al. (2), Bickford (3) and Pettit and Carlson (4) indicate that IBHC is currently a disease of economic significance occurring quite frequently in several regions of the United States and Canada. In view of the fact that IBHC appears to be an emerging disease, this program was prepared as a summary of current knowledge which hopefully will provide useful guidelines for the diagnostician.

CLINICAL FEATURES

FLOCK HISTORY

Breed Incidence. IBHC has occurred in both layer replacement and broiler chickens although most reported cases have involved the latter (1,2,4).

Influence of Commercial Strain. Numerous commercial strains of both light and heavy breeds have been affected.

Influence of Breeder Flock. While there is little evidence implicating specific breeds or strains, there is evidence in several integrated operations suggesting that chickens breaking with IBHC originate from certain breeder flocks. There is some documentation that the IBHC agent is transmitted from dam to progeny (5).

Age Incidence. IBHC is a disease of young chickens with most outbreaks occurring from 5 to 10 weeks of age. The great majority of cases have occurred at 6 to 7 weeks of age.

Seasonal Incidence. There appears not to be a strict seasonal incidence but, in temperate climates, the incidence tends to be greatest in spring and summer.

Presenting Signs. The initial evidence of disease in affected flocks is usually a sudden and drastic increase in mortality. In the early stages there may be a 3 to 10 fold increase in mortality in flocks which otherwise appear quite healthy.

Mortality Pattern. Generally, the mortality rate increases for 3 to 5 days, plateaus at a high level (0.5 to 1.0% per day) for the next 3 to 5 days then falls to normal levels in an additional 3 to 5 days.

Cumulative Mortality Rate. The disease persists in affected flocks for approximately 1 to 2 weeks and the cumulative mortality ranges from 2 to 10%.

Influence of Complicating Diseases. In several cases IBHC has been complicated with other diseases (particularly respir atory and enteric infections) and, in such cases, the mortality rate and the duration of the disease may be extended considerably.

Influence of Housing. Nearly all of our cases of IBHC have occurred in floor - reared chickens. However, a few affected flocks were reared on wire floors.

CLINICAL SIGNS

Appearance of Affected Chickens. As noted above, the initial upturn in mortality may occur without previous observation of overtly sick birds in the flock. As the disease progresses, however, clinically affected chickens may be found. The clinical signs in affected live chickens include pallor and/or jaundice of the unfeathered skin, marked depression, weakness, eventual prostration and death.

Clinical Course. The course of clinical disease in individual chickens is quite rapid -usually 24 hours or less. It is noteworthy that affected live birds selected from a flock for diagnosis will usually die in transit to the diagnostic laboratory if more than a few hours travel time is involved. Another observation suggesting a rapid course is the fact that throughout the duration of IBHC in a flock, the great majority of the chickens appear bright and alert (i.e. there is not a high morbidity rate).

PATHOLOGIC FEATURES

Gross Lesions. A variety of gross tissue alterations have been associated with field outbreaks of IBHC. While the name of the disease implies primary liver involvement, lesions are by no means restricted to liver. Often gross changes in other organs and tissues are as important as hepatic lesions in causing the diagnostician to

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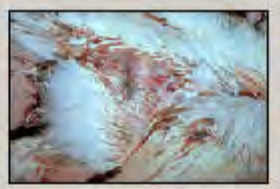
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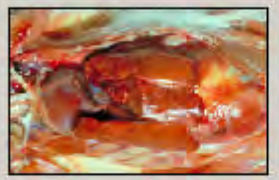
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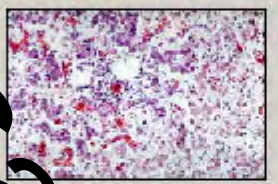
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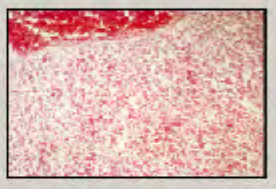
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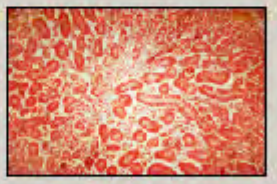
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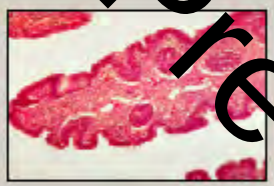
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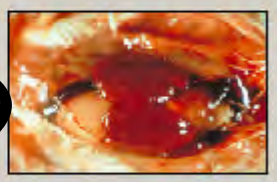
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