



Importance of autopsy in diagnosis of Poultry diseases

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Postmortem examination is indispensable to an intelligent and scientific understanding of the disease process. The purpose of autopsy should not only for identifying the cause of death but also to provide information to extend the horizons of knowledge. We must recognize that lesions are the end result of process involving, several mechanisms, few of which are completely understood. In the search for these facts and to identify the aetiology and to provide a rational basis, for the prevention and treatment of diseases, the importance of autopsy is paramount.

Autopsy is only one phase in the attempt to unravel the mysteries of disease. It is a message of wisdom given from the dead to the living. Unfortunately we often neglect to look into this fact by not undertaking an autopsy and the information that we are likely to gather are lost leading to failure to explain the reason for the death.

Postmortem examination is an art by itself and the effectiveness depends on the competency of the person who does it. The technical background he possesses and

the experience will certainly count in the identification of lesions and interpretation of results. The person who does the job should be a skilled expert in the field of poultry diseases.

Lesion noticed as a result of the disease process are mostly well defined and at certain times confusing and overlapping. These have to be sorted out. As far as poultry diseases are concerned instances occur where multiple diseases are encountered in the flock at the same time. A sound knowledge of poultry diseases coupled with a keen observation power and open mind will help in diagnosing poultry diseases. Poultry diseases spread fast vertically and horizontally as they are closely flocked together. Diagnosis should be quick, and accurate so that immediate therapeutic and preventive measures can be taken up. There is no time for an elaborate laboratory test to be undertaken which are often time consuming or facilities may not be available in the near place. The tests of course can be confirmatory. A tentative diagnosis based on postmortem lesions is paramount importance, if the flock has to be saved and economic loss has to be prevented. The Veterinarian is fortunate in that the ailing birds can be sacrificed as unlike other large animals where economy and sentiments prevents such an approach. On the spot postmortem diagnosis based on the lesions had no substitute for early diagnosis of poultry diseases.

Fortunately lesions in many poultry diseases are specific and diagnostic. Bursal enlargement in IBD, hemorrhages in the caecum and intestine in coccidiosis, greenish cup shaped lesions in Aspergillosis, thickening of the sciatic nerve in Marek's disease, whitish patches in the breast muscle in Vit. E deficiency is some of the examples of the lesions, which give clue to a specific diagnosis.

There are of course emerging and age old diseases, which appear in a subdued way. In such instances symptoms and lesions are mild and varied from the classical type. The mortality may be low. To cite an example, in RD, there may be only just catarrhal en-

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teritis and classical lesions like proventricular hemorrhage, lesions in the caecal tonsil may be absent. This variation seems to occur as a result of partial immunity. In this instances laboratory tests should be resorted to for a precise diagnosis.

A detailed flock history and information on the symptoms manifested and information on the vaccination schedule followed will certainly help in the postmortem diagnosis. There is absolute necessity to visit the farm and observe the management practices adopted, feeding schedule presented and watering system stipulated. The effectiveness of the ventilation, the temperature maintained, humidity prevalent, the flock strength in the space available will all help to provide a good postmortem diagnosis and evidence for the reason for the disease. This in turn will help to suggest appropriate therapeutic and control measures and prevent economic loss.

Pathologist is in the central position of diagnosis. He does the autopsy, get report from the microbiologist/parasitologist/toxicologist and gives the final verdict. He can only do it as the lesions are the key to disease manifestation and subsequent mortality.

A thorough examination of mortality data and the pattern of mortality will also go a long way in making a correct diagnosis. Each farm should have a disease profile chart ready on hand. The Veterinarian should insist the farmer to maintain this.

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their widespread use in poultry. Currently available eukaryotic expression vectors are not optimised for use in chickens, and significant improvements should be possible when the vectors are optimised for poultry. Recent advances in our understanding of the mechanisms of activity of DNA vaccines, exploitation of the potential of this technology for the identification of protective antigens, and optimization of delivery strategies for effective targeting and immune stimulation, all place us on the verge of a new era for prophylaxis and therapy of disease.

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Collection of materials for various laboratory examinations are essential. The need for systematic autopsy has to be emphasized. All organs including the brain have to be examined. A casual examination will not lead to identification of lesions. The presence of *Syngamus* present in the trachea will be over looked if the trachea is not opened. The chicken would have shown respiratory difficulty but at autopsy of lung lesions may not be significant and a correct diagnosis will be missing.

There is no substitute for a systematic postmortem examination of poultry diseases diagnosis. It is a job to be done by a Veterinarian who has a sound knowledge of poultry diseases. Periodical on hand training in poultry autopsy and updating sessions on poultry diseases will go a long way in improving the competency of the Veterinarian. A timely correct diagnosis at the farm will be of immense value to take suitable preventive measures and prevent the economic loss. A delay in diagnosis will certainly lead to heavy economic loss by way of morbidity and mortality. The Veterinarian can help to run the farm without much loss from poultry diseases, provided he has the will to do the autopsy and give the farmer correct diagnosis and treatment. He should soil the hand and save the farmer. In turn the farmer will be indulgent to him and recognize his services.

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