

Gross lesions detected during post-mortem inspection of laying hens: the role of Microscopic Observation



CECAV
ANIMAL AND VETERINARY
RESEARCH CENTRE

Cândido Saraiva ¹, Isabel Pires ¹, Madalena Vieira-Pinto^{1,2}

¹Department of Veterinary Science, UTAD, Portugal,
²CECAV-Animal and Veterinary Research Centre, UTAD, Portugal.

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INTRODUCTION

Meat inspection is an official control process that includes a set of tasks performed at slaughterhouses and sometimes at farms by Official Veterinarians. Its biggest purpose is to ensure that animals enter the food chain in accordance with the legal hygiene, health and welfare requirements. Additionally, the evaluation of data resulting from poultry ante and post-mortem inspections at the slaughterhouse is an important tool to determine animal health and welfare surveillance

Objective

The scopes of this study were accompanying the slaughter process of laying hens and verify the causes of condemnation and their correct diagnosis.

MATERIAL & METHODS

We have investigated the health condition of laying hens on the basis of patho-anatomic findings obtained during post mortem inspection. Nineteen flocks from different farms were slaughtered at ages ranging from 483 to 845 days of life. During the post-mortem inspection, 484053 hens were observed at the slaughter-line. The percentages and causes of total condemnation were recorded. Additionally, different lesions were collected for histopathological examination and processed by conventional methods for light microscopic observation. The paraffin preparations were stained with hematoxylin and eosin.

RESULTS & DISCUSSION

The overall percentage of total condemnation was 2,9% (14104/484053). From those, the main causes of condemnation included: peritonitis (39.7%), salpingitis (25,2%), cachexia (17.8%) and other reproductive pathology (ovary and oviduct) disorders (14,3%).

Among the samples collected for histopathological analysis, it was sent a lesion with several yellow nodules with 2cm diameter at its larger dimensions disseminated by the oviduct, mesentery, intestine, pancreas and spleen (Figure 1). The differential macroscopic diagnosis were coligranuloma, tuberculosis granuloma or carcinoma of the oviduct.



Figure 1

Microscopical analysis revealed a pancreatic infiltrating growth tumour, resulting from the proliferation of acidophilic cytoplasm cells with evident zymogen granules, which are arranged in groups with some small lumina (Figure 2). The diagnosis was Acinar cell carcinoma, an unusual lesion detected in hens.

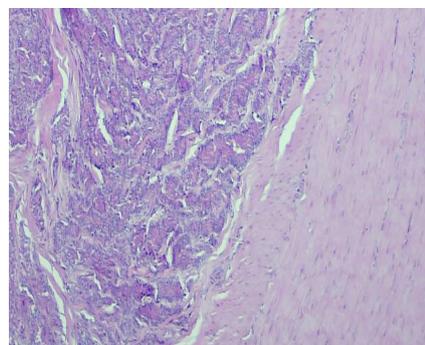


Figure 2

CONCLUSION

This result reinforces the importance of using microscopic observation to support meat inspection in order to have a correct diagnosis and serve as an alarm for the production chain.

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