Atlas of anatomical pathology of the porcine respiratory system

TECHNICAL SPECIFICATIONS

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Format: 22 x 28 cm.
Number of pages: 104
Number of pictures: 170
Binding: Hardcover.
Year: 2013.
RRP: 45 €

This atlas of anatomical pathology allows the identification of the various lesions of the porcine respiratory system. The images that are included focus on the morphological bases of the porcine respiratory pathologies and their relationship with their causes. Each of the pictures, carefully chosen by the author because of their excellent visual and descriptive quality, are accompanied by a short text, with gross and microscopic descriptions that are essential to the understanding of the disease and the establishment of a diagnosis.

Aimed at veterinary surgeons, students, teachers and other professionals in the veterinary sector.
# Atlas of anatomical pathology of the porcine respiratory system

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   - Thoracic cavity and pleura
Nasal cavity

001 Nasal congestion. Diffuse reddening of a piglet’s nasal mucosa. This is a non-specific response to different types of aggressions.


003 Inclusion body rhinitis. Sagittal cut of a piglet’s nasal cavity. Focal deposit on the nasal mucosa, which corresponds to a mucopurulent exudate, a non-specific lesion associated to porcine cytomegalovirus infection.

004 Inclusion body rhinitis. Enlarged nasal gland epithelial cells, with large intranuclear inclusion bodies. Porcine cytomegalovirus infection. HE.
Inflammations

This classification of the different types of pneumonia considers the morphology and distribution of the lesions as well as the nature of the exudate.

Purulent bronchopneumonia

042
Purulent bronchopneumonia. Dark to greyish-red cranioventral consolidation with a clear limit between the healthy lung and the affected area. The colour of the surface of the affected area is not uniform due to the phases of the pneumonia.

043
Purulent bronchopneumonia. Leukocytic exudate in the lumen of a bronchiale and in various isolated groups of alveoli, indicative of the aerial spread of the disease. HE.

044
Purulent bronchopneumonia. Leukocytic exudate towards the alveoli with a predominance of neutrophils. HE.

045
Purulent bronchopneumonia. Cranioventral consolidation, clearly separate from the healthy parenchyma. The colour of the consolidated lung varies from dark red to greyish-red according to the chronology of the lesions.
Interstitial pneumonia.

Enlarged lungs due to lack of pulmonary collapse. Small brownish red consolidation foci distributed on the surface of the whole organ.

Interstitial pneumonia.

Consolidation in the form of locally confluent reddish areas scattered throughout both lungs. Concomitant infection by porcine reproductive and respiratory syndrome virus (PRRS) and porcine circovirus (PCV).

Interstitial pneumonia.

Ventral aspect of the lungs. Reddish dun consolidation foci distributed throughout the whole lung. The enlarged interlobular septa, with a gelatinous aspect, are a sign of the marked interstitial oedema. Lesions associated with infection by porcine circovirus.
Thoracic cavity and pleura

158 Haemothorax.
Presence of non-coagulated blood in the thoracic cavity in a case of fibrinous pericarditis.

159 Fibrinous pleuritis.
Greyish pseudomembranes on the serosa of both lungs, which are more dense in the cranioventral regions. Reddened lung as a result of congestion and marked septa due to interstitial oedema. Polyserositis.

160 Fibrinous pleuritis.
Exudate in the form of an acidophilic mesh with shapeless and dense foci and few inflammatory cells. Polyserositis. HE.

161 Fibrinous polyserositis.
General aspect of the thoracic cavity. The volume of the pericardial sac stands out in the image due to the presence of thick pseudomembranes visible through the perforation.

The morphological diagnosis established from the pseudomembranous inflammation does not exclude other changes in the composition of the fibrinous exudate, such as the presence of haemorrhage or serous or purulent exudate.