Microbiology and pathology of fibrinous pericarditis in Danish slaughter pigs

The prevalence of fibrinous pericarditis detected at slaughter in Danish slaughter pigs is approximately 0.02%. The microbiology and pathology of this disorder was studied through 46 field cases collected at slaughter from May 1994 to August 1995. Mycoplasmas (Mycoplasma hyopneumoniae, M. hyosynoviae and M hyorhinis) were isolated from the pericardium in 38 cases and from the joints in six. M. Hyopneumoniae dominated with 33 isolates from the pericardium. Actinobacillus pleuropneumoniae was isolated from the pericardium in three cases (as mono-infection in one and together with M., hyopneumonia in two cases) and Actinomyces pyogenes was isolated from the pericardium twice (as mono-infection in one case and together with M. hyopneumonia in another). A. pyogenes was also present in the lung, liver and kidney in one of these cases. Streptococcus suis was isolated together with mycoplasmas from the pericardium in three cases. The pericardium was sterile in three cases and contained a low grade mixed flora in two; the latter is believed to be a result of the slaughter procedure rather than an infection. No chlamydiae were found in connection with the microbiological examination. Parvovirus was found in one case in the pericardium and in two cases in the spleen. Forty-five cases were subacute or chronic. The gross pathological examination showed that bronchopneumonia, chronic pleuritis and synovitis or a low grade arthritis occurred in most cases. Only the arthritic lesions are believed to be pathogenetically concurrent with the pericarditis. Slight evidence of stasis of the liver and/or periangular edema was present in six cases. The histopathological examination confirmed the above mentioned findings. Bacterial colonies were found within the fibrinous layer on the pericardium in all cases from which either A. pleuropneumoniae, A. pyogenes or S. suis was isolated. It is concluded that in this study mycoplasmas, particularly M. Hyopneumoniae, are the more likely cause of fibrinous pericarditis in slaughter pigs.

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