

CARDIAC PATHOLOGY OF THE SARDINIAN WILD BOAR (*Sus scrofa*) WITH PARTICULAR ATTENTION TO ENDOCARDIOSIS

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Abstract: The endocardiosis, occasionally worsened by valvular prolapse, has been often described in adult and young pigs. It has been observed that haemodynamics, immunological, genetic and constitutional factors are involved. 48 wild boars were examined. The animals were shot down in hunting season 1992-93 and came from the 4 sardinian districts. All the hearts were grossly examined and the cardiac valves were treated for light microscopy. We didn't observe prominent lesions but small nodular and translucent thickening of the valvular edge. No valve prolapse was present. Microscopic examination showed mixomatosis, oedema, metachromasia and Alcian-positivity in 27 mitralis (56.25%) and 6 tricuspid valves (12.5%). In 2 wild boars parietal endocarditis was also found.

Keywords: Wild boar, *Sus scrofa*, Suidae, Anatomic-Pathology, Heart, Myocarditis.

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1. Introduction

Endocardiosis, occasionally worsened by valvular prolapse, has often been described in adult and young pigs. It has been observed that haemodynamic, immunological, genetic and constitutional factors are involved. Some authors have suggested an analogy of swine endocardiosis with Marfan's disease in man. Since the literature is limited we believed interesting to carry out a systematic study of the heart of the Wild boar, paying particular attention to endocardiosis. Our aim was to determine the extent and characteristics of the different lesions and compare them with those of the domestic pigs.

2. Observations

The subjects of this study were 48 wild boars of both sexes, 2 months to 7 years old and weighing 4-70 kg from 4 sardinian districts, shot in the 1992 - 1993 hunting season. The hearts were examined grossly and then paraffin-embedded, stained with H.E. Polychrom Alcian - PAS, Toluidin Blue and Weigert-Van Gieson for L.M.

No prominent lesions were observed, only moderate nodular and translucent thickening of the valvular edge. No valve prolapse was present. Microscopic examination showed mixomatosis, oedema, metachromasia and Alcian-positivity in 27 mitralis (56.25%) and 6

tricuspid valves (12.5%) but these percentages are lower if only severe lesions are taken into consideration.

On analyzing the data by age, we found a higher prevalence rate in young boars and an increase in severity in the older animals.

We also found foci of endocarditis in 2 hearts (4%), giant-cells-granulomatous myocarditis (Ziehl-Nielsen-negative) in 3 ones (6%), eosinophilic myocarditis in 4 ones (8%), lymphoplasmacell myocarditis in 12 ones (25%) and purulent myocarditis in 2 ones (4%) in both left and right sides of the hearts.

Sarcocystis at different stages, with thick and hairy walls, were found in 73% of the subjects.

No significant difference was evident between males and females.

3. Discussion

In the Sardinian Wild boar, the endocardiosis is less widespread than in the domestic pig; accordingly, the severity of the lesion is not comparable with that described in the latter.

On the basis of our epidemiological data it is difficult to show an ethiological and pathogenic similarity between endocardiosis in the Wild boar and in the domestic pig; in any case the farmer is less exposed to the risk factors.

Some interesting data which emerged from our study were the relatively high prevalence of

endocardiosis in young boars and, on the other hand, the high number of small lesions found in adult boars. In our opinion, these findings can be explained only by accepting that the young animal is more exposed to the pathology than the adult subject, probably because the young boar is more affected by anatomical and stress factors. It seems, however, that the lesions, although apparently serious, can regress and disappear. In contrast, adults remain exposed to factors provoking a degenerative endocardial process. These factors, probably of different origin (alimentary, infectious, etc.) are not however able to cause serious damage. Likewise, the changes and inflammatory processes observed in the course of our study, although frequent, did not appear to be serious. The finding of myocarditis is of particular interest in the light of recent investigations showing tubercular infection in wild boars. The other types of myocarditis that were found (eosinophilic and lymphoplasm cell) can be considered a manifestation of a moderate reaction to the frequent presence of sarcocystis. On the whole, our findings seem to confirm that the cardiac pathology of the Sardinian Wild boar, as previously seen in studies about their cardiac pathology, is much less influenced by negative factors than that of the domestic pig. However, a study on a large number of subjects should be done to confirm our data.