POSTER ABSTRACTS

Veterinary Pathology: Exotic, wildlife & zoo animals

171 | CHARACTERIZATION OF AMYLOIDOSIS IN EURASIAN STONE-CURLEWS (BURHINUS OEDICNEMUS) FROM THE CANARY ISLANDS

L. Marrero-Ponce[1], A. Fernández[1], C. Rivero-Herrera[1], J. Navarro-Sarmiento[1], R. Grandía Guzmán[1], C. Manuel Suárez-Santana[1], Ó. Quesada-Canales[1]
[1] *Instituto Universitario de Sanidad Animal y Seguridad Alimentaria (IUSA), ULPGC, Arucas, Spain*

Background
Amyloid deposits consist of fibrils' accumulation resulting from different precursor proteins. Their identification is crucial for adequate disease prognosis and treatment. In avian amyloidosis, most reports do not determine which fibrils are implicated or apply out-of-date methods. Other studies use antibody-based methods, but their use has important drawbacks, especially in scarcely studied species. Currently, laser microdissection followed by tandem mass spectrometry (LMD-MS/MS) is considered the gold standard for amyloid characterization.

Materials & Methods
30 specimens of Eurasian stone-curlews (*Burhinus oedicnemus*) were necropsied. Tissue samples were taken, routinely processed, and stained with HE. When lesions consistent with amyloid deposit were observed, Congo red stain and polarized light were employed. After confirmation of amyloidosis in 7 individuals, selected formalin-fixed paraffin embedded samples of 5 animals were processed and subjected to LMD-MS/MS.

Results
7 Eurasian stone-curlews showed macroscopic and histologic lesions consisting of amyloidosis, including hepatomegaly, splenomegaly, nephromegaly and the presence of extracellular amorphous hyaline deposits with a red discoloration when stained with Congo red and yellow-red-green birefringence under polarized light. Serum amyloid A (SAA) was the amyloid precursor protein most detected in all animals analyzed but one, in which apolipoprotein A-I (ApoAI) was ampler. ApoAI and apolipoprotein A-IV (ApoAIV) were present in all samples. Heparan sulphate proteoglycan 2 (HSPG2) was present in four animals.

Conclusion
The amyloid proteome of the 5 specimens analyzed consisted of SAA, ApoAI and ApoAIV and, frequently, HSPG2. ApoAI surpassed SAA in one case, consequently this lipoprotein should be considered as potential precursor protein in avian species.