

DEGENERATIVE CARDIOMYOPATHY IN A CAPTIVE KANGAROO (*Macropus giganteus*)

Authors: Chineme, C. N., NJOKU, C. O., and EVBUOMA, N.

Source: Journal of Wildlife Diseases, 14(1) : 52-53

Published By: Wildlife Disease Association

URL: <https://doi.org/10.7589/0090-3558-14.1.52>

BioOne Complete (complete.BioOne.org) is a full-text database of 200 subscribed and open-access titles in the biological, ecological, and environmental sciences published by nonprofit societies, associations, museums, institutions, and presses.

Your use of this PDF, the BioOne Complete website, and all posted and associated content indicates your acceptance of BioOne's Terms of Use, available at www.bioone.org/terms-of-use.

Usage of BioOne Complete content is strictly limited to personal, educational, and non - commercial use. Commercial inquiries or rights and permissions requests should be directed to the individual publisher as copyright holder.

BioOne sees sustainable scholarly publishing as an inherently collaborative enterprise connecting authors, nonprofit publishers, academic institutions, research libraries, and research funders in the common goal of maximizing access to critical research.

DEGENERATIVE CARDIOMYOPATHY IN A CAPTIVE KANGAROO (*Macropus giganteus*)

C. N. CHINEME and C. O. NJOKU, Department of Veterinary Pathology and Microbiology, Ahmadu Bello University, Zaria, Nigeria.

N. EVBUOMA, National Veterinary Research Laboratory, Kano, Nigeria.

Abstract: Myocardial degeneration and necrosis in an adult female Australian kangaroo (*Macropus giganteus*) are described. The animal was housed in a zoo at Kano, Nigeria for approximately five years before death. This is believed to be the first reported case of degenerative cardiomyopathy in a captive marsupial in Nigeria.

CASE REPORT

An adult female Australian Great gray Kangaroo (*Macropus giganteus*), approximately five years old, was one of 12 in a group of kangaroos housed at the Kano zoo for approximately five years until her death in June, 1976. The animal was reported to have died suddenly, without showing any previous signs of illness. She had a young adult female offspring which also died a few days after the mother's death.

At necropsy, the ventricles of the heart were pale and contained multiple white to grey foci and linear streaks. These lesions were more numerous in the left than the right ventricle, and were seen in the ventricular septum. The lungs were congested and dark red in color. All other organs examined appeared essentially normal.

On histologic examination of the myocardium, the white to grey foci and streaks were seen to be swollen, fragmented fibers, associated with marked hyaline and granular degeneration and mineralization.

In some areas in the myocardium, lesions consisted of focal disseminated, non-inflammatory coagulative necrosis while in others, the necrotic myocardial tissue had been replaced by

fibroblasts, macrophages and histiocytes. In some focal areas regeneration was marked by the presence of proliferating muscle nuclei and myoblastic elements. The necrotic and hyalinized myocardial fibers were devoid of cross striations.

The lungs showed diffuse congestion and alveolar oedema. No histologic lesions were seen in other organs examined.

DISCUSSION

Myodegeneration including cardiomyopathy associated with dietary deficiencies or imbalance is a well recognized but imperfectly understood disease entity in farm animals.^{1,3} Pronounced degeneration and necrosis of skeletal muscle fibers has been described in East African wild and domestic ruminants.⁴ Muscle dystrophy associated with feeding of cod liver oil has been described in kangaroos,² while myonecrosis has been reported in free-living and captive macropods.⁵

Documented cases of cardiomyopathy in zoo animals in Nigeria are scanty. A diagnosis of degenerative cardiomyopathy was made in the present case on the basis of gross and histologic findings.

LITERATURE CITED

1. ALLAWAY, W. H. 1973. Selenium in the food chain. *Cornell Vet.* 63: 151-170.
2. GOSS, L. J. 1940. Muscle dystrophy in three Kangaroos associated with feeding of cod liver oil and its response to alphatocopherol. *Zoologica. New York Zoo. Soc.* 25: 523-524.
3. HADLOW, W. J. 1973. Myopathies in Animals. In: *The Striated Muscle*. C. M. Pearson and F. K. Mostofi (Eds.). Williams and Wilkinson Company, Baltimore, Md., pp. 364-409.
4. MUGERA, G. M. and J. G. WANDERA. 1967. Degenerative myopathies in East African domestic and wild ruminants. *Vet. Rec.* 80:410-413.
5. MUNDAY, B. L. 1972. Myonecrosis in free-living and recently captured macropods. *J. Wildl. Dis.* 8: 191-192.

Received for publication 29 June 1977
