A Trichoepithelioma in a Wild Eastern Grey Kangaroo (Macropus giganteus)

Authors: Speare, Richard, and Banks, David

Source: Journal of Wildlife Diseases, 23(3) : 508-509

Published By: Wildlife Disease Association

URL: https://doi.org/10.7589/0090-3558-23.3.508
A Trichoeplthelioma in a Wild Eastern Grey Kangaroo  
(Macropus giganteus)

Richard Speare* and David Banks,7 Graduate School of Tropical Veterinary Science, James Cook University of 
North Queensland, Townsville, Queensland 4811, Australia. 7 Present address: Kamuzu Central Hospital, P.O. Box  
149, Lilongwe, Malawi, Central Africa. 7 Present address: C.S.I.R.O. Division of Animal Health, Koronivia Veterinary 
Laboratory, P.O. Box 77, Nausori, Fiji

ABSTRACT: The gross and microscopic pathology of a neoplastic skin lesion from the chest of 
a wild adult eastern grey kangaroo (Macropus giganteus) was consistent with the diagnosis of 
a trichoeplthelioma. This was a benign lesion of 
the epithelial cells of the hair follicle and is the 
second type of skin neoplasm reported from 
macropodids.

Key words: Kangaroo, Macropodidae, Mac-
ropus giganteus, skin neoplasia, trichoepltheli-
oma, pathology.

A tumor on the skin of the ventral chest in a mature male eastern grey kangaroo, Macropus giganteus, shot 60 km south of 
Charters Towers, Queensland (021°S, 
147°E), was placed in 10% formalin 
and examined by routine histological tech-
niques. The fixed lesion measured 3.5 × 
3.0 × 1.3 cm and was sessile with its base 
slightly narrower than the elevated portion 
(Fig. 1). The surface of the lesion was hair-
less, blue-grey in color and had several 
irregular superficial ulcers with bases 
formed from black material that tended 
to flake. The consistency of the lesion was 
hard, and black well-circumscribed roughly 
circular areas occupied about two-thirds 
of one end of the cut surface. The re-
mainder of the cut surface was white or 
cream in color. The mass was confined to 
the skin.

Histologically, the lesion consisted of 
multiple acini, many cystic, ranging in size 
from a macroscopically obvious 8 mm (Fig. 
1) to a microscopic 12 μm (Fig. 2). Cysts 
were larger than the purely cellular acini 
and were formed from an outer cellular 
layer several cells thick, surrounding a 
keratinaceous central mass. Cells had small, 
ovooid nuclei with dense to reticular chro-
matin, and moderate to small amounts of 
colorless or slightly eosinophilic cytoplasm. 
Cellular boundaries were indistinct. Nu-
clei in the inner layers tended to elongate 
tangentially and transition from the cell-
ular to the keratinaceous layer was abrupt. 
Keratohyalin granules were common at the 
transition zone. Pyknotic nuclear remnants 
were present in the keratinaceous central 
mass in some cysts. Multiple acini of the 
same cell type that formed the cellular 
layer of the cysts were present between 
the cysts, separated by a scant stroma of 
dense connective tissue. Basement mem-
branes were present around all acini and 
cysts. Mitoses were few and nuclear pleo-
morphism was slight. Hairs were not seen. 
The keratinaceous central masses in areas 
that had appeared black on gross exami-
nation contained fine brown pigment 
which stained for melanin; melanin gran-
ules occurred diffusely in some cyst walls. 
Cells containing dense accumulations of 
melanin granules were present occasion-

![Figure 1. Vertical section through the preserved trichoeplthelioma from a grey kangaroo. Arrow indicates the largest cyst (see text). Scale is in mm.](https://bioone.org/journals/Journal-of-Wildlife-Diseases/23(3)/508-509/fig1)
FIGURE 2. Trichoepithelioma from a grey kangaroo showing acini in a stroma of dense connective tissue. Some acini are cystic and contain keratin and melanin. H&E.

ally in outer layers of cyst walls and in the stroma.

The neoplasm was consistent with a trichoepithelioma on histological criteria (Moulton, 1978). Trichoepitheliomas are neoplasms of the epithelial cells of the wall of the hair follicle, and, as in this case, have no malignant tendency (Moulton, 1978).

In previous reports on neoplasms from macropodids the gastrointestinal tract was the most common site. The only skin neoplasm reported previously in macropodids is the papilloma caused by the macropodid pox virus. This was found in quokkas, Setonix brachyurus (Papadimitriou and Ashman, 1972); red kangaroos, Macropus rufus (Bagnall and Wilson, 1974; Presidente, 1978); western grey kangaroos, Macropus fuliginosus (Presidente, 1978); and eastern grey kangaroos (McKenzie et al., 1979). Trichoepitheliomas are not reported previously in an Australian marsupial. A representative histological section has been deposited as case A0188 in the Taronga Pathology Registry, Taronga Zoo, P.O. Box 20, Mosman, New South Wales, Australia.

LITERATURE CITED


Received for publication 1 September 1986.