

## MACROPOD POXVIRUS INFECTION (CASE 701.1)

### CASE HISTORY

Several formalin fixed skin biopsies were submitted to the Registry from a four month old eastern grey kangaroo (*Macropus giganteus giganteus*) (Fig. 1). Gross photographs of the lesion were submitted, but no history was provided.



Fig1 Facial mass

### HISTOPATHOLOGY

**Skin:** The sample consists of a markedly thickened epidermis and a very small segment of dermis. The epidermis is markedly thickened due to acanthosis and hyperkeratosis. The skin is thrown up into a series of papillary projections. Hyperkeratotic debris has accumulated between the folds of the papilliform projections (Fig 2).

Epithelial cells within the stratum spinosum often contain large cytoplasmic vacuoles that contain large eosinophilic inclusion bodies (Fig 3). Pyknotic cellular debris is scattered throughout the epidermis and there are bacterial colonies within the keratin layer. The dermis (not shown) contains a mild mononuclear cell infiltrate.

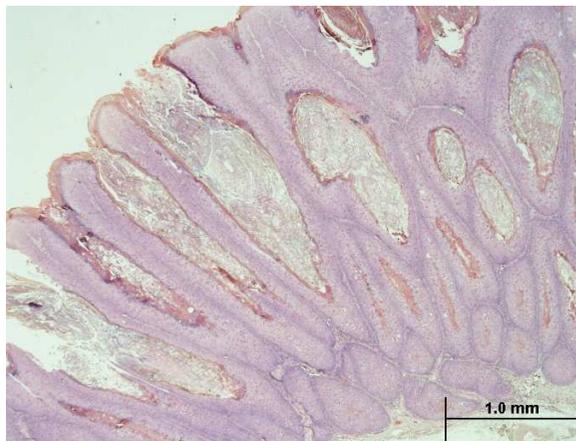


Fig 2. Skin H & E 40x

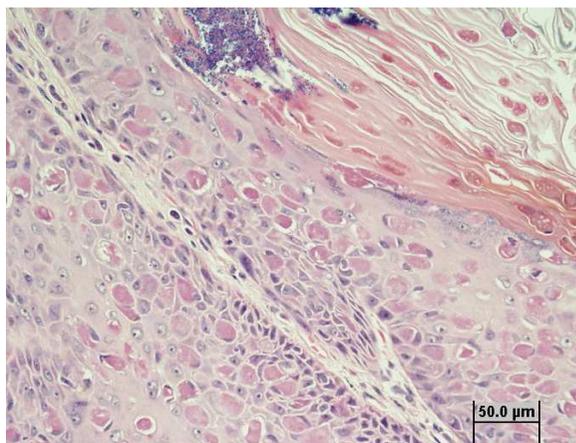


Fig 3. Skin H & E 400x

### MORPHOLOGICAL DIAGNOSIS

Marked epidermal hyperplasia with eosinophilic cytoplasmic inclusion bodies - pox virus infection

### COMMENTS

The lesions in the skin are characteristic of pox virus infection. This virus tends to be specific to macropods, and is thought to be spread from one animal to another via fighting, direct contact with open skin wounds, or biting insects. Most often these lesions are self-limiting. The lesions most often occur on the muzzle and distal portions of the limbs. Some veterinarians advocate surgical removal to debulk the lesions and serve as an autogenous vaccine.

The gross lesions of cutaneous poxvirus infection in macropods, humans, horses and chimpanzees are also referred to as molluscum contagiosum.

### REFERENCES

- ROTHWELL T.L. KEEP J.M. XU F.N. MIDDLETON D.J. (1984) Poxvirus in marsupial skin lesions. [Journal Article] Australian Veterinary Journal. 61(12):409-10.  
MCKENZIE R.A. FAY F.R. PRIOR H.C. (1979) Poxvirus infection of the skin of an eastern grey kangaroo. [Journal Article] Australian Veterinary Journal. 55(4):188-90.