



ECVP/ESVP Summer School in Veterinary Pathology



Marie Curie Training Courses

Summer School 2006 – Emerging Infectious Diseases Case 15

CASE 15 Provided by: Dr Julian Chantrey, Department of Veterinary Pathology, University of Liverpool, UK

Signalement: Red squirrel (*Sciurus vulgaris*), adult, female

History:

Wild animal. Found dead.

Gross Findings:

Moderate emaciation. The skin at face and feet exhibited hyperplastic dermatitis with crust formation.

Histology: Tissue from a red squirrel.

1. DESCRIPTION OF HISTOLOGIC FINDINGS

Haired skin. Multifocally, extensive ulceration of the epidermis is seen, with superficial crusts of eosinophilic cellular debris, ghost cells, keratin, myriad colonies of coccoid bacteria and degenerate neutrophils. Intact epithelium exhibits mild orthokeratotic hyperkeratosis (interspersed with coccoid bacterial colonies) and diffuse, marked intracellular oedema (ballooning degeneration). Some epithelial cells exhibit amphophilic, round, 10-20 µm diameter, intracytoplasmic inclusion bodies. Similar changes are seen within the epithelium of hair follicles. In the superficial to deep dermis there is a moderate to severe, diffuse, mixed (neutrophils, lymphocytes, plasma cells, macrophages) inflammatory infiltration. All dermal blood vessels are intensely filled with erythrocytes (marked diffuse hyperaemia). The dermis also exhibits several hair fragments which are surrounded by (degenerate) neutrophils, often in association with coccoid bacterial colonies. Similar bacterial colonies are also seen within hair shafts.

2. MORPHOLOGIC DIAGNOSIS

Haired skin; severe, multifocal to coalescing, subacute to chronic necrotising and ulcerative dermatitis and folliculitis with superficial coccoid bacterial colonies and amphophilic intracytoplasmic epithelial inclusion bodies, consistent with poxvirus infection

3. ETIOLOGY

Squirrel pox virus (Chordopoxviridae)