PERIHEPATIC ABSCESS IN A BLOSSOM BAT (*Syconycteris australis*) (CASE 1651.1)

CASE HISTORY

A six year old, male, captive blossom bat (*Syconycteris australis*) with no history of health problems was found dead.

GROSS PATHOLOGY

External examination: No significant findings.

Hydration: fair
Muscle mass: good
Fat deposits: good

Internal examination: The stomach is distended with clear fluid. There is a 1 cm x 5 mm diameter encapsulated mass protruding from the ventrolateral aspect of the left hepatic lobe. On cut section this mass contains thick green fluid. The mass is contiguous with the hepatic parenchyma, and is adherent to the splenic capsule. Thick green material fills the central portion of the adjacent hepatic lobe. Multiple 1 mm black foci are evident throughout the pulmonary parenchyma. The renal parenchyma is pale.

HISTOPATHOLOGY

Lesions are not evident within the following tissues: Cranial sinus, colon, small intestine.

Spleen: The splenic capsule is markedly thickened due to the presence of a band of connective tissue surrounding a pool of eosinophilic amorphous material (Fig 1). Scattered polymorphonuclear cells are evident throughout the eosinophilic amorphous material. Between the pool of eosinophilic amorphous material and the parenchyma of the spleen, is a large wall composed of macrophages that have abundant eosinophilic cytoplasm, and granulation tissue. The splenic parenchyma is congested, but contains many lymphoid follicles. Within the central region of multifocal follicles there are clusters of macrophages that have abundant eosinophilic cytoplasm.

Pancreas: The adventitia of the pancreas is incorporated in the reaction surrounding the capsule of the spleen.

Liver: (Fig 2, 3) Within one sample of the liver there is diffuse hyperplasia of the biliary tract. Bile leaking is evident throughout the biliary tract, including canaliculi. The biliary epithelium is diffusely basophilic. Several bile ducts contain central cellular debris. Within a second sample of liver, the hepatic capsule is adherent to the capsule of the spleen. There is extensive capsular fibrosis with multiple small to large caseating abscesses, as described above, within the capsule of the spleen. These abscesses multifocally replace the parenchyma of the liver. Beaded acid fast bacilli are evident within Zeihl Neilsen acid- fast stained sections of these abscesses (Fig 4).

Within the hilus of this lobe there is marked biliary hyperplasia (Fig 2). These bile ducts have markedly basophilic and irregular epithelium and the portal regions contain increased quantities of connective tissue and polymorphonuclear cells.

Scattered hepatocytes have enlarged nuclei with peripheralisation of chromatin and an amphophilic or "punched out" nucleus (Fig 5).

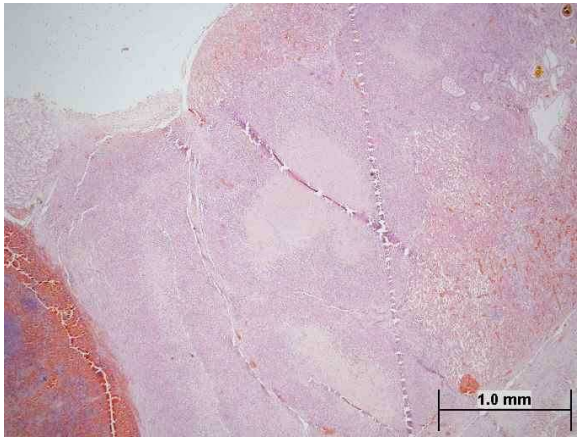

Fig 1. Spleen and liver attached by the granuloma H & E 40x

Kidney: Scattered renal tubules are distended with eosinophilic to yellow amorphous material. Multi-focal medullary tubules are dilated, containing central waxy yellow to basophilic material.

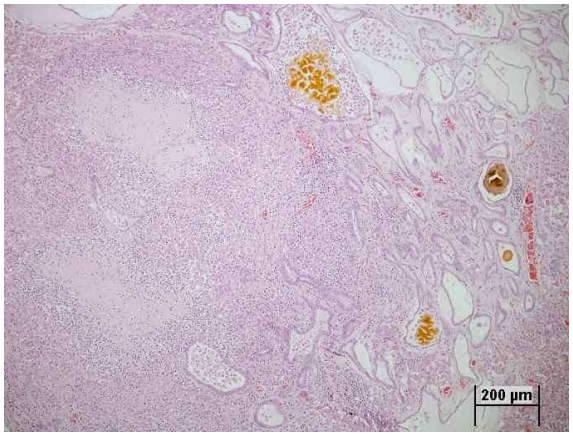

Fig 2. Liver H & E 100x

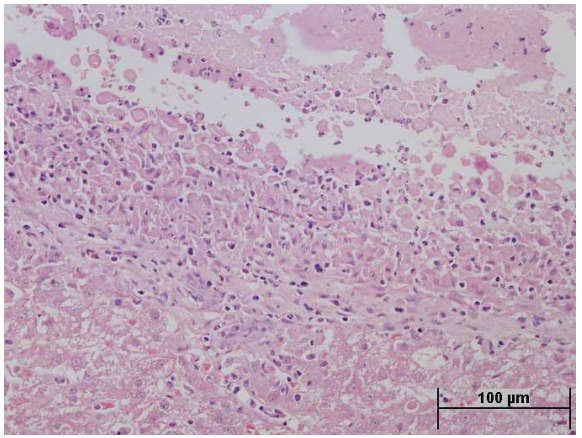

Fig 3. Hepatic abscess H & E 1000x

Case interpretation: Karrie Rose. Case construction: Damien Higgins

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BACTERIOLOGY
Liver: 1+ Strep (mixed species) on aerobic culture, *Enterococcus faecalis* on aerobic culture. Acid fast bacteria are evident on impression smears and in culture.

Liver: *Mycobacterium avium*. Reported by Queensland Health Pathology and Scientific Services.

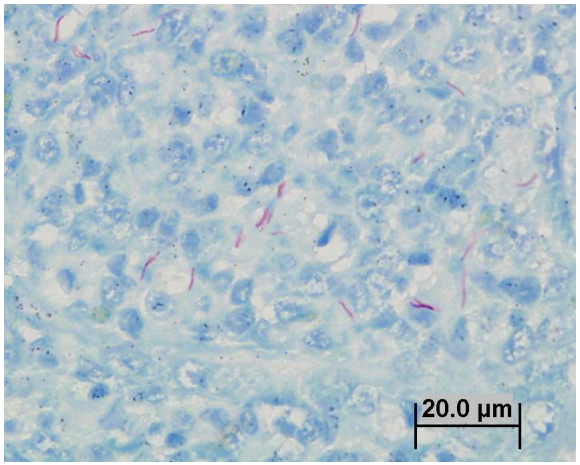

Fig 4. *Mycobacteria avium* represented as beaded, acid-fast bacilli with Zeihl Neilsen acid-fast stains of the perihepatic abscess. 1000x

MORPHOLOGICAL DIAGNOSIS
Multifocally extensive chronic hepatic abscesses - *M. avium*
Extensive, chronic splenic capsular abscesses - *M. avium*
Hepatic intranuclear inclusion bodies

COMMENTS
Despite having a large liver abscess the animal was in good body condition and had a full stomach. The abscesses were the result of *Mycobacterium avium* infection. The amphophilic intranuclear inclusion bodies are not an uncommon finding in the hepatocytes of Australian mammals (Fig 4). The morphology of the inclusion bodies is suggestive of polyoma virus infection, but the exact composition and significance of the inclusions are unknown.

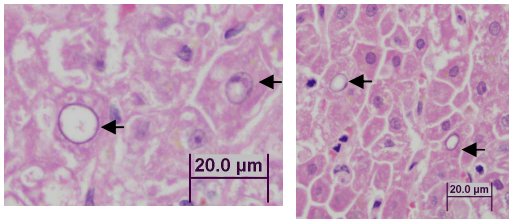

Fig 5. Hepatocytes with amphophilic intranuclear inclusions (arrows) H & E 1000x

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