

TABLE
Main histopathological changes observed in monkeys' squirrels (*Saimiri* spp.) infected with yellow fever virus (YFV)

Organ	dpi	Histopathological changes
Heart	1 and 6	Myocardium with areas close to the endocardium containing myofibrers with increased eosinophilia, nuclear pyknosis and cytoplasmic vacuoles
	2	Discrete areas of incipient necrosis in ischemic the endocardium
	3	Discreet areas of subendocardial incipient ischemic necrosis bordered by vacuolated myocytes
Inoculated area	1 and 2	Dermis presented mild multifocal perivascular mononuclear infiltrate; inflammatory infiltrate with extensive focal polymorphonuclear and mononuclear cells in the panicle.
	3	Light focal perivascular mononuclear infiltrate in the adipose panicle
	4 and 5	Mild perivascular mononuclear infiltrate in the adipose panicle
	6	Discrete multifocal perivascular mononuclear infiltrate
	7	Mononuclear infiltrate in the light focal superficial dermis
	10-20	Light multifocal perivascular mononuclear infiltrate in the adipose panicle and adjacent muscle
Liver	30	Light multifocal mononuclear infiltrate in the adipose panicle and adjacent areas
	1	Cytoplasmic swelling and pallor, thin hepatocyte vacuolisation mainly in Z3; moderate diffuse haemosiderosis in Kupffer cells and macrophages in PT and hepatocytes; mononuclear inflammatory infiltrate in mild multifocal PT; haemorrhage in Z2/Z3, steatosis and lytic necrosis in hepatocytes.
	2	Hepatocytes with mild cytoplasmic pallor at Z3 and mild diffuse haemosiderosis; dilation of sinusoid capillaries at Z3; haemorrhage in Z2/Z3, steatosis and lytic necrosis in hepatocytes.
	3	Light diffuse swelling and cytoplasmic pallor; mild diffuse haemosiderosis in Kupffer cells; mononuclear inflammatory infiltrate with rare eosinophils in mild multifocal PT; mononuclear inflammatory infiltrate with random multifocal neutrophils between the strands of hepatocytes; haemorrhage in Z2/Z3, steatosis and lytic necrosis in hepatocytes.
	4	Light to moderate multifocal PT mononuclear inflammatory infiltrate and mononuclear infiltrate with random multifocal neutrophils between the hepatocyte strands; diffuse hepatocyte swelling and cytoplasmic pallor; mild diffuse haemosiderosis; haemorrhage in Z2/Z3, steatosis and lytic necrosis in hepatocytes.
	5	Mild diffuse haemosiderosis and moderate hepatocyte cytoplasmic vacuolation and PT; individual hepatocyte necrosis is rarely found; haemorrhage in Z2/Z3, steatosis and lytic necrosis in hepatocytes.
	6	Coagulation necrosis in Z2/Z3 massive and marked diffuse associated with congestion and haemorrhage; hepatocytes with granulated and eosinophilic cytoplasm, karyolysis, pyknosis and karyorexia; Kupffer cells were found at Z2/Z3 with abundant, granulated and eosinophilic cytoplasm, vacuoles and nuclear debris (Councilman bodies); endothelial cells present moderate swelling and occasionally there are clusters of polymorphonuclear cells. In the PT and remaining hepatocytes present swelling and vacuolisation of the cytoplasm; rare intranuclear eosinophilic linear inclusions (including brick or "blochlike") inclusions have been observed in hepatocytes; haemorrhage in Z2/Z3, steatosis and lytic necrosis in hepatocytes.
	7	Mononuclear infiltrate predominantly in mild multifocal PT and mild diffuse vacuolisation of hepatocytes
	10	Hepatocyte swelling with diffuse mild to moderate cytoplasmic vacuolation, more intense in Z3; light multifocal mononuclear infiltrate.
	20	Diffuse hepatocyte vacuolisation, more intense in Z3; mild haemosiderosis.
30	Hepatocyte swelling and vacuolisation mainly in mild diffuse Z3; mild haemosiderosis and mild multifocal mononuclear infiltrate.	
Spleen	1	Pyknotic nodules and debris within follicles and in the cytoplasm of follicular macrophages, with mild lymphoid depletion
	2	Mild lymphoid depletion with discrete neutrophil infiltrate; some with pyknotic nuclei, free debris in the follicles or in macrophages.
	3	Centrofollicular rarefaction with pyknotic nuclei and debris; prominent and binucleated macrophages, with eosinophilic material and cytoplasmic nuclear remains.
	4	White pulp with centrofollicular rarefaction, moderate depletion with lymphocytes with pyknotic nuclei and prominent macrophages containing nuclear remains and eosinophilic material in the cytoplasm
	5	White pulp follicles with retracted lymphocytes with pyknotic nuclei and prominent macrophages containing lumpy eosinophilic material and nuclear remains
	6	Rare pyknotic lymphocytes and nuclear debris; mild extramedullary haematopoiesis; well-defined follicle; bleeding was also observed in the centre of the cortical region.
	7	Follicular macrophages containing eosinophilic cell debris and cell debris in the cytoplasm; mild diffuse lymphoid hyperplasia and congestion with necrosis in the follicles that was characterised by the presence of debris in the macrophage cytoplasm.
	10	Moderate centrofollicular degeneration and presence of macrophages with cellular debris
	20	Individual necrosis of small groups of lymphocytes with the presence of macrophages containing cellular debris; neutrophils with swollen cytoplasm.
	30	Rarefaction of follicles with individual necrosis of small groups of lymphocytes, neutrophils and macrophages containing cellular debris
Lung	1-7	Light diffuse congestion
	6	Oedema, congestion, severe haemorrhage and mononuclear inflammatory infiltrate
	10	Mild diffuse congestion with multifocal atelectasis; rare areas of tubular mineralisation in the spinal cord.
	20	Anthraxnose and mild diffuse congestion; rare areas of tubular mineralisation in the spinal cord.
30	Light diffuse congestion	
Kidney	2-5	Light multifocal interstitial mononuclear infiltrate and rare eosinophils
	6	Discrete multifocal interstitial mononuclear infiltrate; cytoplasm vacuolisation, haemorrhagic spots on Bowman's capsule and tubular necrosis.
	7	Light diffuse congestion with areas of discrete multifocal tubular calcification in the spinal cord
	10-20	Rare foci of mineralisation in the spinal cord
Stomach	1 and 2	Light multifocal mononuclear infiltrate with eosinophils on the <i>lamina propria</i>
	3	Occasional individual cells in the mucosa with eosinophilia and pyknosis
	4	Mononuclear infiltrate with eosinophils in the light diffuse submucosa
Axial lymph nodes	6	Moderate number of acidophilic cells with nuclear pyknosis and increased eosinophilia
	10	Light mononuclear infiltrate with eosinophils in the submucosa
	2-6	Moderate haemosiderosis and non-evident follicles
	7	Mild diffuse lymphoid hyperplasia and congestion
	10	Moderate lymphocyte necrosis characterised by the presence of debris in the macrophage cytoplasm
Brain	20	Mild individual lymphocyte necrosis in the follicles characterised by the presence of debris in the macrophage cytoplasm; there is a small amount of foamy macrophages in the spinal cord and occasional clear vacuoles between the lymphocytes in the cortex.
	30	Discreet individual lymphocyte necrosis in the follicles with a small amount of foamy macrophages in the spinal cord
	2	Parietal, occipital and frontal cortex with focal calcification in the leptomeninges extending to the superficial layer of the cortex
	3	Parietal cortex with mononuclear inflammatory infiltrate in mild multifocal leptomeninges
Brain	6	Occipital cortex with deep layers of white matter; there is a vacuolisation area of the neuropile where there are astrocytes with abundant eosinophilic cytoplasm; occasionally, in other areas in the white matter without vacuolisation.
	7	Cerebellum with discrete vacuolisation in white matter

dpi: days post-infection; PT: portal tract.