CYTOMEGALOVIRUS

ANIMAL GROUP AFFECTED	TRANS-MISSION	CLINICAL SIGNS	FATAL DISEASE?	TREATMENT	PREVENTION & CONTROL
Macaques, capuchin monkeys, woolly monkeys, squirrel monkeys, tamarins, baboons, Afr. green monkeys, chimpanzees, gorillas, owl monkeys, tarsiers and slow lorises	Horizontally through body secretions: saliva, blood, urine, milk, semen. Vertically : intrauterine.	Usually asymptomatic in humans and non-human primates. Can cause symptoms as: fever, jaundice, elevated liver enzymes, dyspnoea, neurological signs in monkeys.	No. Immuno compromised people and non-human primates have a higher risk of developing symptoms, like prolonged fever and (mild) hepatitis.	No, only symptomatic. In humans Ganciclovir is used	Test animals serologically during quarantine period.

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Susceptible animal groups
Non-human primates, humans
CMV is endemic in many human populations (50-85% of the adult population in the USA)

Causative organism
Species-specific Cytomegaloviruses (Beta herpes viruses). Already classified: Cercopithicine herpes virus 3 (SA-6), Cercopithicine herpes virus 4 (SA-15), Cercopithecine herpes virus 5 (African green monkey CMV) and Cercopithecine herpes virus 8 (Rhesus monkey CMV)

Zoonotic potential
Virus is believed to have a narrow host range; interspecies transmission does occur, however less easily than other cytolytic herpes viruses

Distribution
Common in non-human primates; found universally in all geographic locations and socio-economic groups in humans

Transmission
Mainly horizontally through body fluids, intrauterine infections occur in humans and non-human primates

Incubation period
Not exactly known. Virus can hide in glandular tissue, lymphoreticular cells and kidneys

Clinical symptoms
Fever, jaundice, dyspnoea, diarrhoea, neurological signs

Post-mortem findings
Disseminated lesions in the brain, lymph nodes, liver, spleen, kidney, small intestine, nervous system, arteries. Characteristic viral (intranuclear) inclusion bodies. Neutrophilic infiltrates in meninges and gastrointestinal tract

Diagnosis
Serology (IgM, IgG), virus isolation, PCR, atypical cells with intranuclear inclusion bodies in saliva and urine. Elevated liver enzymes

Material required for laboratory analysis
Serum, for CMV antibodies and PCR. Blood chemistry (ALAT, ASAT, ALP)

Relevant diagnostic laboratories
Institute of Virology, Erasmus Medical Centre, Rotterdam, the Netherlands

Treatment
None; symptomatic. Humans: Ganciclovir

Prevention and control in zoos
Serology (antibodies against CMV virus) during quarantine period

Suggested disinfectant for housing facilities

Notification
Not compulsory

Guarantees required under EU Legislation

Guarantees required by EAZA Zoos

Measures required under the Animal Disease Surveillance Plan

Measures required for introducing animals from non-approved sources

Measures to be taken in case of disease outbreak or positive laboratory findings

Conditions for restoring disease-free status after an outbreak
Virus will persist within groups

Contacts for further information
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