PLASMODIUM KNOWLESI-MALARIA

ANIMAL GROUP AFFECTED	TRANS-MISSION	CLINICAL SIGNS	FATAL DISEASE ?	TREATMENT	PREVENTION & CONTROL
Macaca spp. *Presbytis melalophos* man	via *Anopheles* spp.	In rhesus monkeys or man: lytic infections or shock	In rhesus monkeys and man	Chloroquine Pyronavidine Mefloquine Sulfadoxamine - pyrimethamine	*In houses* Mosquito control *in zoos*

Fact sheet compiled by Manfred Brack, formerly German Primate Center, Göttingen/Germany.	**Last update** 22.11.2008
Susceptible animal groups : naturall hosts : *Macaca fascicularis, M. nemestrina, Presbytis melalophos.* Vectors : *Anopheles balabacensis introlatus, Anopheles hackeri,* other Malaysian *Anopheles* spp.	
Causative organism : *Plasmodium knowlesi* (quotidian : 24 h. asexual blood cycle).	
Zoonotic potential: in Indonesia up to 100% of suspected human P.malariae infections are caused by *P. knowlesi,* fatal in man.	
Distribution: Malaysia, Philippines, Formosa.	
Transmission: *Anopheles balabacensis introlatus, A. hackeri, A. vagus, A. sinensis, A. kochi, A. maculatus, A. quadrimaculatus.*	
Incubation period: in experimental infections 24 hs.	
Clinical symptoms: only mild in Philippine cynomolgus monkeys, in Malaysian cynomolgus monkeys or rhesus monkeys lytic infections or acute or prolonged shock. Listlessnes, lethargy, irritability, anorexia, fever, anemia, hematocrit- and blood-pressure drop, weight loss, dehydration, cyanosis. In man: (only Duffy- blood group positive phenotype (Caucasians) affected: myalgia, malaise, headache, anorexia, nausea, vomitus.	
Post mortem findings: in lytic infections congestion of portal veins and cerebral vessels with parasitized and nonparasitized erythrocytes, macrophages, and polymorphonuclears, hemosiderosis of Kupffer cells.	
Diagnosis: blood films, RNA and DNA determinations	
Material required for laboratory analysis: blood, liver tissues (necropsies).	
Relevant diagnostic laboratories	
Treatment : Chloroquines, Quinine, Quinidine, Pyronavidine, Sulfadoxamine- Pyrimethamine, Sulfalene-Pyrimethamine, Atovaquone, 8- aminoquinoline.	
Prevention and control in zoos	
Suggested disinfectant for housing facilities	
Notification	

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
Experts who may be consulted

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