

TOXOPLASMOSIS IN PRIMATES

ANIMAL GROUP AFFECTED	TRANSMISSION	CLINICAL SIGNS	FATAL DISEASE ?	TREATMENT	PREVENTION & CONTROL
All nonhuman primate genera infected	Perorally	Fever, anorexia, increased breathing frequency, vomitus, diarrhoea	Yes: in squirrel monkeys and Callitrichidae	Sulfadiazine / Pyrimethamine Spiramycin. Clindamycin	<i>In houses</i> No exposure to feline faeces <i>in zoos</i> no exposure to feline faeces and uncooked meat

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Susceptible animal groups All primate genera infected, diseases mostly in New World monkeys and lemurs.	
Causative organism <i>Toxoplasma gondii</i> (Apicomplexa).	
Zoonotic potential Theoretically yes.	
Distribution World- wide.	
Transmission Perorally from cat faeces containing cysts or from meat containing bradyzoites (in man also intrauterine). Aerogenous infection, contamination of bedding material by cat faeces, or uptake of feral rats suspected in captive squirrel monkeys.	
Incubation period Prepatent period after tissue cyst ingestion: 3 – 10 days Prepatent period after ingestion of sporulated cysts : 20 – 34 days.	
Clinical symptoms Fever, anorexia, increased breathing frequency, vomitus, intermittent diarrhoea. In squirrel monkeys frequently death without prior clinical illness.	
Post mortem findings Severe pulmonary edema or focal pneumonia, hydropericard, hydrothorax, focal necroses especially in the liver. In lemurs extensive necrosis of the mesenteric lymph nodes predominated besides necroses in liver and spleen. Cysts in the CNS and other organs, rarely microglial nodules.	
Diagnosis Methylene blue staining, PCR, PAP-immunohistology, direct agglutination, latex agglutination tests, indirect immunofluorescence tests, ELISA, immunosorbent tests. <i>T.gondii</i> infections can be classified using synthetic peptides. Most human infections involve serotypes I to III, but only type I is highly virulent in mice. Cave: <i>Neosporium caninum</i> , which is transmissible at least to Old World monkeys may easily be misdiagnosed as <i>T.gondii</i> in histological slides. confirmation by ELISA or other immunological tests is recommended.	
Material required for laboratory analysis Altered tissues, serum.	
Relevant diagnostic laboratories 1. Local veterinary and medical laboratories. 2. Konsiliarlaboratorium für Toxoplasmose Universitätsklinikum Göttingen Abteilung für Bakteriologie Kreuzberggring 57 D 37075 GÖTTINGEN/Germany	



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Treatment

Sulfadiazine / Pyrimethamine (Daraprim)-combination (In man: 160 mg trimethoprim and 800 mg sulfamethoxazole every other day)
Spiramycin;
Clindamycin hydrochloride (In infants: 300 mg every 6 hs).

Prevention and control in zoos

Prevention of exposure to feline faeces and uncooked meat.. 10 mg /kg benzeneacetonitrile (Diclazuril)

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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