

ECHINOCOCCOSIS

ANIMAL GROUP AFFECTED	TRANSMISSION	CLINICAL SIGNS	FATAL DISEASE ?	TREATMENT	PREVENTION & CONTROL
Old World nonhuman primates	Perorally	Abdominal distention, sudden death	Occasionally yes	Mebendazole, Albendazole	<p><i>In houses</i> No contact to canid or feline faeces</p> <p><i>in zoos</i> no direct or indirect contact to canid or feline faecal materials fox-control</p>

Fact sheet compiled by Manfred Brack, formerly German Primate Center, Göttingen / Germany.	Last update 22.11.2008
Susceptible animal groups Primary hosts : foxes, occasionally dogs, rarely cats. As intermediate hosts : primarily Arvicolidae, <i>Microtus</i> spp., <i>Ondatra zibethicus</i> , occasionally primates : Pongidae, Cercopithecidae, Prosimiae.	
Causative organism <i>Echinococcus granulosus</i> , <i>E. multilocularis</i> , <i>E. vogeli</i> .	
Zoonotic potential Probably none from nonhuman primates.	
Distribution <i>E. granulosus</i> : World – wide, <i>E. multilocularis</i> : holarctic regions of the northern hemisphere, <i>E. vogeli</i> : tropical America.	
Transmission Perorally via materials contaminated by canid or felid faeces.	
Incubation period In man : 5 – 15 years. In <i>M. fascicularis</i> less than 28 months	
Clinical symptoms Tumor- or tuberculosis like : Abdominal distention, gastric pain, icterus, elevated alkaline phosphatase- and LDH-levels, In pulmonary echinococcosis sudden death from anaphylactic shock.	
Post mortem findings Cyst formation in abdominal, thoracic or pelvic organs. In <i>E. granulosus</i> singular, large cysts up to 15 cm diameter, in <i>E. multilocularis</i> and <i>E. vogeli</i> tumorlike masses of small, confluent cysts. The cysts contain viable scolices, they are surrounded by a thick laminated membrane.	
Diagnosis Needle-biopsies, sonography, CT, MRT, ELISA, PCR, immunoblots, immunoprecipitation, coproantigen-determination, necropsy.	
Material required for laboratory analysis Cyst fluid, serum, feces.	
OIE Reference Laboratories <ul style="list-style-type: none"> • Prof. Masao Kamiya Laboratory of Environmental Zoology, Department of Biosphere and Environmental Sciences, Faculty of Environmental Systems, Rakuno-Gakuen University Midori-machi 582, Ebetsu 069-8501 JAPAN Tel: (81.11) 388.49.09 Fax: (81.11) 388.49.09 Email: mkamiya@rakuno.ac.jp 	



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Relevant diagnostic laboratories

1. Local veterinary laboratories.
2. Konsiliarlaboratorium für Echinokokken
Institut für Hygiene und Mikrobiologie der
Universität Würzburg
Josef-Schneider-Str. 2
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3. Bundesforschungsanstalt für Viruserkrankungen der Tiere, Institut für epidemiologische Diagnostik
D 16868 Wusterhausen, Germany

Treatment

In man: surgical resection followed by chemotherapy (Benzimidazoles: Mebendazole, Albendazole) for at least 2 years. When surgery is inappropriate lifetime chemotherapy is necessary

Prevention and control in zoos

Fox control within the premises of zoos (baits containing 50 mg praziquantel/bait), avoidance of trees, branches or foliage for environmental enrichment, taken from the forests without heat sterilization. *E. multilocularis* – eggs are destroyed by heating above 60° C or by freezing below – 70 ° C.

Suggested disinfectant for housing facilities

Notification

In Germany: Echinococcosis in man report to the Robert Koch Institute, Berlin according to § 7 Infektionsschutzgesetz.

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

1. Prof. Dr. M. Frosch, Konsiliarlaboratorium Würzburg
2. Prof. Dr. K. Brehm, Konsiliarlaboratorium Würzburg

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