



ACANTHOCEPHALAN INFECTIONS

ANIMAL GROUP AFFECTED	TRANSMISSION	CLINICAL SIGNS	FATAL DISEASE ?	TREATMENT	PREVENTION & CONTROL
Primarily New World monkeys, but transmissible to Old World monkeys	Perorally via cockroaches	Listlessness, anorexia, prostration, death	Yes	Fenbendazol, Mebendazole, Pyrantel palmoate	<i>In houses</i> Cockroach control <i>in zoos</i> cockroach control

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Susceptible animal groups Primarily Callitrichidae, and Cebidae, in Zoo settings also Pongidae, Hylobatidae, Colobinae, Cercopithecidae, Prosimiae, man.	
Causative organism <i>Prosthenorchis elegans</i> , <i>P.spirula</i> , <i>Moniliformis moniliformis</i> .	
Zoonotic potential No.	
Distribution <i>Prosthenorchis</i> spp. primarily South- and Central America, in captivity World-wide, <i>Moniliformis moniliformis</i> : World wide.	
Transmission Perorally through ingestion of cystacanth-infected cockroaches (<i>Blatella germanica</i> , <i>Rhyparobis madurae</i> , <i>Blabera fusca</i>).	
Incubation period Prepatent period: 1 – 3 months.	
Clinical symptoms Abrupt listlessness, anorexia, prostration, death.	
Post mortem findings Granulomas and abscesses in the terminal ileum and adjacent parts of the intestinal tract with 2cm long and up to 2 mm wide, white worms protruding into the intestinal lumen. Occasional perforation of the inestinal wall and purulent peritonitis.	
Diagnosis Ovodiagnosis, necropsy.	
Material required for laboratory analysis Faecal samples, recovered helminths.	
Relevant diagnostic laboratories	
Treatment Fenbendazole (20 mg for 5 days), Mebendazole 100 mg 2 x daily for 3 days (man), Pyrantel palmoate (11 mg/ kg – man)	
Prevention and control in zoos Strict cockroach control in monkeys houses	
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
References <ol style="list-style-type: none">1. Brack, M. 1967. Magen – Darmerkrankungen als Todesursachen bei Primaten. Verh. ber. Erkr. Zootiere 9: 43 – 52.2. Brack, M., and C. Niemitz. 1984. The parasites of wild – caught tarsiers. <i>In</i> : C. Niemitz (ed.). Biology of Tarsiers. Gustav Fischer, Stuttgart. Pp. 77 – 84.3. Counselman, K., C. Field, G. Lea, B. Nickol, and R. Neafie . 1989. <i>Moniliformis moniliformis</i> from a child in Florida . Am. J. Trop. Med. Hyg. 41 : 88 – 90.4. deAurajo Santos, F. G., J. C. Bicca Marques, C. Calegra – Marques, E. M. P. de Farias, and M. A. de O. Azevedo. 1995. The occurrence of parasites in free – ranging callitrichids. Neotrop. Primates 3 : 46 – 47.5. Düwel, D., E. Weinmann, und R. Kirsch. 1981. Zur Panacur – Behandlung des Prosthenoorchis- und Bertiella – Befalls bei Affen. Verh. ber. Erkr. Zootiere 23 : 247 – 251.6. Hänichen, T., F. Wiegand, und G. von Hegel. 1995. Zur Enterokolitis mit Beteiligung protozoischer und metazoischer Parasiten bei Menschenaffen. Verh. ber. Erkr. Zootiere 37 : 173 – 181.7. Kim, J. C. S. and R. J. Wolf 1980. Diseases of moustached marmosets. <i>In</i>: Montali, R.J. and G. Migaki (eds.) The Comparative Pathology of Zoo Animals. Smithsonian Institution Press, Washington. Pp. 431 – 435.8. Nielsen, D. H. 1980. <i>Prosthenoorchis elegans</i> infestation in a primate colony. Am. Assoc. Zoo Vet. Annu. Conf. Proc.: 113 – 116.9. Porter, J. A. 1972. Parasites of marmosets. Lab. Anim. Sci. 22: 503 – 506.10. Tantalean, M., A. Gozalo, and E. Montoya. 1990. Notes on some helminthic parasites from Peruvian monkeys. Lab. Primate Newsl. 29 (2) : 6 – 8.11. Thatcher, V. E., and J. A. Porter. 1968. Some helminth parasites of Panamanian primates. Trans. Am. Microsc. Soc. 87 : 186 – 196.12. Yamaguti, S. 1963. Systema Helminthicum, Vol. V : Acanthocephala. Interscience Publishers, New York.