

OPHIDIAN PARAMYXOVIRUS INFECTION

ANIMAL GROUP AFFECTED	TRANSMISSION	CLINICAL SIGNS	FATAL DISEASE?	TREATMENT	PREVENTION & CONTROL
Mostly Snakes Other reptile species (lizards and chelonians) can also be affected.	The virus is excreted in the faeces and respiratory tract excretions	Sudden death, respiratory disease, lethargy, anorexia, central nervous disorders	In a number of cases, depending on species	Treatment/control of secondary bacterial infections, supportive treatment	Quarantine, hygiene. Virus detection and/or antibody titers for entry of new snakes (and lizards) into a collection

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Susceptible animal groups Snakes, viperid snakes most commonly affected, but also other species. Lizards and chelonians can also be infected (rare)	
Causative organism Reptilian paramyxovirus.	
Zoonotic potential No	
Distribution Worldwide	
Transmission Through direct contact with excreta, via vectors like water, mites, hands of caretakers, aerosols	
Incubation period Not clear, days to weeks, depending on the virus strain and on the species infected	
Clinical symptoms Sudden death, respiratory disease, anorexia, lethargy, in some cases central nervous disorders, e.g. opisthotonos.	
Post mortem findings Macroscopically: (exudative) pneumonia, swollen liver, enlarged pancreas, edema in the celomic cavity, pale kidneys. Microscopically: Proliferative pneumonia, pancreatitis, pancreas necrosis, nephritis, and encephalitis.	
Diagnosis In live animals: <ul style="list-style-type: none"> • Antibody detection (hemagglutination inhibition test) • Virus detection (oral and cloacal swabs) by RT-PCR (virus isolation also possible but less sensitive) In dead animals: <ul style="list-style-type: none"> • Histology: (sometimes intracytoplasmatic) and intranuclear inclusion bodies in liver, lung, pancreas, kidney and brain • RT-PCR • Virus isolation • Immunohistochemical detection in tissues and in situ hybridization have been described but are not generally available 	
Material required for laboratory analysis Lung and intestine are the best tissues for virus detection in infected animals (formalin fixed for histology, fresh or frozen for RT-PCR or virus isolation), oral and cloacal swabs can be used for virus detection in live animals. Serum or plasma can be used for antibody detection.	



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Treatment <p>Use of antibiotics to control secondary infections. E.g. enrofloxacin, marbofloxacin, trimetoprim-sulfamethoxazole. Supportive treatment. Bacteriological culture of excretions from the glottis, sensitivity for antibiotics.</p>
Prevention and control in zoos <ul style="list-style-type: none">• Quarantine new snakes for a minimum of 60 to 90 days in a separate room, with separate set of husbandry tools, separate air duct system, use footbaths containing disinfectant at entrance. Weigh the animals as they enter and exit the quarantine. House the animals individually.• Test oral and cloacal swabs for virus shedding during quarantine.• Necropsy all animals that are euthanised or die.• Check for internal and external parasites; treat the animals against these common parasites.• Serological test for antibodies: perform the test before the animal leaves the quarantine.• Disinfect used materials and housing on a regular basis.
Suggested disinfectant for housing facilities <p>All virucidal disinfectants, e.g. 10% chlorine bleach solution, quaternary ammonium compounds, and ammonia.</p>
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
Contacts for further information
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