CHIMPANZEE CORYZA/RESPIRATORY SYNCYTIAL VIRUS (RSV)

Animal Group(s) Affected	Transmission	Clinical Signs	Severity	Treatment	Prevention and Control	Zoonotic
Chimps most commonly; Muriqui; other primate spp. may be infected experimentally or have seroevidence of exposure	Aerosol, direct or indirect contact, fomites; both respiratory secretions and feces contain virus	Cough, sneeze, rhinorrhea, lethargy, anorexia; progression to lower respiratory disease; peracute death possible	High morbidity, low to moderate mortality; limited reported fatalities in juvenile chimps with pneumonia; outbreak in chimp group with 10% mortality	Symptomatic; Palivizumab has been used to reduce risk of infection in high risk children	Avoidance of contact with sick humans; proper hygiene and staff PPE	Yes

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Fact Sheet Reviewed by: Kay A. Backues; Elizabeth Hammond

Susceptible animal groups: Chimpanzees; one fatal case report in a muriqui; experimental infection with clinical signs in owl and bonnet monkeys; serologic evidence of exposure in orangutans; possible disease in other great apes and red-capped mangabeys.

Causative organism: Respiratory Syncytial Virus: Family Paramyxoviridae, Genus Pneumovirus, 2 antigenic subgroups (A and B)

Zoonotic potential: Yes, but transmission generally from human to primate, not primate to human.

Distribution: Worldwide in temperate areas; frequently presenting in fall/winter months

Incubation period: 4-5 days

Clinical signs: coughing, sneezing, rhinorrhea, ocular discharge, anorexia, lethargy which may progress to pneumonia. Peracute death has been reported. Recovery typically in 1-2 weeks in humans.

Post mortem, gross, or histologic findings: Bronchopneumonia, bronchiolitis, pneumonitis, rhinitis, hyperplasia of pulmonary lymph nodes and lymphadenitis. Multinucleate syncytial cells with eosinophilic cytoplasmic inclusion bodies may be seen.

Diagnosis: RT-PCR, DIA, IFA, ELISA

Material required for laboratory analysis: nasal/nasopharyngeal swab, aspirate, or wash (PCR); serum (DIA, IFA, ELISA).

Relevant diagnostic laboratories:
VRL Laboratories (RT-PCR, DIA)
P.O. Box 40100
7540 Louis Pasteur, Suite 200
San Antonio, Texas 78229
Phone: 877-615-7275
Fax: 210-615-7771
www.vrlsat.com
BioReliance (IFA, ELISA)

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9630 Medical Center Drive
Rockville, MD 20850-3300
Phone: 301.610.2521
Fax: 301.610.2587
Email: ahs@bioreliance.com
www.bioreliance.com

Treatment: Symptomatic. Palivizumab (hRSV IgG) has been used in high risk human children to prevent severe disease, although it cannot treat already advanced disease. Antibiotics for secondary bacterial infections. NSAIDs may control some clinical signs.

Prevention and control: Prevent sick human-primate contact and transmission via fomites; appropriate use of masks, gloves, and hand washing. Highly transmissible. No vaccine is available.

Suggested disinfectant for housing facilities: Virus is readily inactivated by most disinfectants (i.e., quaternary ammonium compounds, phenols). It usually lasts only hours in environment, although can persist longer in cool, shady areas or in serum or tissue debris, transmission via fomites (i.e., enrichment items, cage furniture)

Notification: Reportable in humans in many states, check individual state regulations.

Measures required under the Animal Disease Surveillance Plan: None.

Measures required for introducing animals to infected animal: No long term immunity, and no carriers. Introduction after clinical signs have resolved and area is disinfected would be optimal.

Conditions for restoring disease-free status after an outbreak: Resolution of clinical signs; some immunocompromised humans can shed for up to 4 weeks, though usual time of shedding is 3-8 days.

Experts who may be consulted:

Centers for Disease Control and Prevention
National Center for Immunization and Respiratory Diseases/Division of Viral Diseases
600 Clifton Rd
Atlanta, GA 30333
800-CDC-INFO
http://www.cdc.gov/ncird/DVD.html

References:

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