

MEASLES

[Rubeola, Morbilli]

SPECIES: Monkeys

AGENT: Family Paramyxoviridae, Genus Morbillivirus. The same genus contains the viruses of Canine Distemper and Bovine Rinderpest.

RESERVOIR AND INCIDENCE: Man is the only known reservoir. New world monkeys are more resistant than old world monkeys but exhibit high mortality when infected.

TRANSMISSION: Virus is excreted from the mucous membranes of the eye and pharynx and later from the respiratory and urinary tracts. Virus is shed in the prodromal phase and continues through the exanthematous phase. Highly contagious! Can spread from man to monkey, monkey to monkey, man to man, and back to monkey to man.

DISEASE IN NONHUMAN PRIMATES: Many infections occur subclinically. Rash, fever, facial edema, giant cell pneumonia, conjunctivitis, nasal discharge.

DISEASE IN MAN: Incubation period 10-14 days. Conjunctivitis Koplik spots - bluish white spots on buccal mucosa 2-3 days after onset Leukopenia Rash in mouth, cheeks, neck, chest, and body. Can be complicated by middle ear infection, bronchopneumonia, encephalitis Fetal risk if contracted during pregnancy. The mortality rate in children in the U.S. is 0.2%, but may be as high as 10% in developing countries.

DIAGNOSIS: clinical signs, serology, histopath.

TREATMENT: Bed rest, acetaminophen, saline eye sponges, nose drops. Vitamin A (400,000 IU/day) has been shown to reduce pediatric morbidity and mortality.

PREVENTION/CONTROL: Vaccinate personnel working with nonhuman primates (Live attenuated measles vaccine) if they do not have: 1. a titer to rubeola (HI >1:4 protective) 2. Confirmed history of previous vaccination 3. confirmed prior disease Live attenuated measles vaccine can be given to macaques but causes disease and death in marmosets and owl monkeys. This is a very serious disease to be introduced into a monkey colony by humans infected by measles.

BIOSAFETY LEVEL: BL-2

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