RAT BITE FEVER
[Streptobacillary fever, Haverhill fever, epidemic arthritic erythema, sodoku]

SPECIES: Rats & mice

AGENT: Gram negative, pleomorphic bacillus. Two different agents can cause disease:
1. Streptobacillus moniliformis (Haverhill Fever) *Named after a 1926 outbreak in Haverhill, Mass. attributed to contaminated milk. 2. Spirillum minus (Sodoku)

RESERVOIR AND INCIDENCE: Present in the oral and respiratory passages of a large number of asymptomatic rodents, including Rats and Mice. Incidence of disease appears to be low. Historically, wild rat bites and subsequent illness (usually small children) relate to poor sanitation and overcrowding.

TRANSMISSION: Man infected by bite of infected rodent or via contaminated milk or food

DISEASE IN ANIMALS: Rats: inapparent infection Mice: acute, systemic, fatal disease in immunologically inexperienced mice. Surviving mice (or if endemic disease), exhibit suppurrative polyarthritis, swelling and loss of digits or limbs.

DISEASE IN MAN: Acute febrile disease following bite from a rodent. Can see inflammation, lymphadenopathy, and nonspecific signs. May exhibit rash on extremities, often soles and palms. May see arthritis with S. moniliformis. Incubation period variable: S. moniliformis: hours to 1 to 3 days S. minus: 1 to 6 weeks Symptoms usually resolve spontaneously. Complications, if not treated promptly, lead to pneumonia, hepatitis, enteritis, endocarditis with a 10% fatality rate.

DIAGNOSIS: Culture: S. moniliformis requires 10 to 20% horse or rabbit serum and reduced oxygen tension. S. minus- won't grow in vitro. Must inoculate culture specimens into lab animals and use dark field microscopy.

TREATMENT: Treat with procaine penicillin G or tetracycline HCl. Give supportive and symptomatic measures as indicated.

PREVENTION/CONTROL: Bacteriologic monitoring Proper treatment of rodent bites

BIOSAFETY LEVEL: BL-2

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