

YERSINIA PSEUDOTUBERCULOSIS

[AND ENTEROCOLITICA: (Pseudotuberculosis)]

SPECIES: Wide distribution in commonly used lab animals

RESERVOIR AND INCIDENCE: Ubiquitous in nature, isolated from dust, soil, water, milk. Natural infections occur in man, birds, rodents, rabbits, guinea pigs, mice, cats, nonhuman primates, sheep, swine, goats.

TRANSMISSION: direct contact, or fecal contaminated food or water cause most transmission from animals to man. Human cases of have been reported in association with disease in household pets, particularly sick puppies and kittens. The most important source of *Y. enterocolitica* infection may be pork, as the pharynx of pigs may be heavily colonized.

DISEASE IN ANIMALS: guinea pigs, rabbits, and hamsters exhibit poor condition and enlarged lymph nodes. Subacute clinical signs are common, with diarrhea and weight loss, possibly death within 2 weeks to 3 months. Chinchillas are very susceptible to infection with *Y. enterocolitica*. In sheep, abortions, epididymitis and orchitis occur with high mortality. In cattle, abortion and pneumonia occur. Nonhuman primates exhibit an ulcerative colitis. Histopathological lesions include acute inflammation of the terminal ileum with mesenteric lymphadenitis occurs. Sometimes abscesses develop in the liver, spleen, and lungs. Usually self-limiting, but there is a fatality rate of 5-7%.

DISEASE IN MAN: acute watery diarrhea, mesenteric lymphadenitis which can be confused with appendicitis, fever, headache, pharyngitis, anorexia, vomiting erythema nodosum (in about 10% of adults), post-infectious arthritis, iritis, cutaneous ulceration, hepatosplenic abscesses, osteomyelitis and septicemia.

DIAGNOSIS: fecal culture using cold enrichment technique. Serologic diagnosis can be made by an agglutination test or by ELISA.

TREATMENT: usually resistant to penicillin and its derivatives. Agents of choice are the aminoglycosides and cotrimoxazole. Both are usually sensitive to the tetracyclines.

PREVENTION/CONTROL: Control rodents and prevent contamination of food and water by rodents and birds. Pasteurize milk. Cook pork thoroughly. **Personal protective clothing, sanitation, and personal hygiene important**

BIOSAFETY LEVEL: BL-2

(This publication is courtesy of the University Research Compliance Office, Kansas State University.)