Yersiniosis

Yersiniosis is an infectious disease caused by a *bacterium* (germ) of the genus *Yersinia*. Most human illness is caused by one species, *Y. enterocolitica*. Infection with *Y. enterocolitica* can cause a variety of symptoms depending on the age of the person infected. Infection with *Y. enterocolitica* occurs most often in young children. Common symptoms in children are fever, abdominal pain, and diarrhea, which is often bloody. Symptoms typically develop 4 to 7 days after exposure and may last 1 to 3 weeks or longer. In older children and adults, right-sided abdominal pain and fever may be the predominant symptoms, and may be confused with appendicitis.

Only a few strains of *Y. enterocolitica* cause illness in humans. The major animal reservoir for *Y. enterocolitica* strains that cause human illness is pigs, but other strains are also found in many other animals including rodents, rabbits, sheep, cattle, horses, dogs, and cats. In pigs, the bacteria are most likely to be found on the tonsils.

Infection is most often acquired by eating contaminated food, especially raw or undercooked pork products. The preparation of raw pork intestines (chitterlings) may be particularly risky. Infants can be infected if their caretakers handle raw chitterlings and then do not adequately clean their hands before handling the infant or the infant's toys, bottles, or pacifiers. Drinking contaminated unpasteurized milk or untreated water can also transmit the infection. Occasionally *Y. enterocolitica* infection occurs after contact with infected animals. On rare occasions, it can be transmitted as a result of the bacterium passing from the stools or soiled fingers of one person to the mouth of another person. This may happen when basic hygiene and handwashing habits are inadequate. Rarely, the organism is transmitted through contaminated blood during a transfusion.

Y. enterocolitica is a relatively infrequent cause of diarrhea and abdominal pain. Based on data from the Foodborne Diseases Active Surveillance Network (FoodNet), which measures the burden and sources of specific diseases over time, approximately one culture-confirmed *Y. enterocolitica* infection per 100,000 persons occurs each year. Children are infected more often than adults, and the infection is more common in the winter.

DIAGNOSIS

Y. enterocolitica infections are generally diagnosed by detecting the organism in the stools. Many laboratories do not routinely test for *Y. enterocolitica*,so it is important to notify laboratory personnel when infection with this bacterium is suspected so that special tests can be done. The organism can also be recovered from other sites, including the throat, lymph nodes, joint fluid, urine, bile, and blood.

TREATMENT

Uncomplicated cases of diarrhea due to *Y. enterocolitica* usually resolve on their own without antibiotic treatment. However, in more severe or complicated infections, antibiotics such as aminoglycosides, doxycycline, trimethoprim-sulfamethoxazole, or fluoroquinolones may be useful. Most infections are uncomplicated and resolve completely. Occasionally, some persons develop joint pain, most commonly in the knees, ankles or wrists. These joint pains usually develop about 1 month after the initial episode of diarrhea and generally resolve after 1 to 6 months. A skin rash, called "erythema nodosum," may also appear on the legs and trunk; this is more common in women. In most cases, erythema nodosum resolves spontaneously within a month.

PREVENTION

- Avoid eating raw or undercooked pork.
- Consume only pasteurized milk or milk products.
- Wash hands with soap and water before eating and preparing food, after contact with animals, and after handling raw meat.
- After handling raw chitterlings, clean hands and fingernails scrupulously with soap and water before

touching infants or their toys, bottles, or pacifiers.

- Someone other than the food handler should care for children while chitterlings are being prepared.
- Prevent cross-contamination in the kitchen: -Use separate cutting boards for meat and other foods. -Carefully clean all cutting boards, counter-tops, and utensils with soap and hot water after preparing raw meat.
- Dispose of animal feces in a sanitary manner.

Most of this information is courtesy of US Government CDC. In times of an emergency much of this material may not apply when it comes to specialized care and testing. These are guidelines to help you when that care is not available. Some of this information is very technical and difficult to understand, but hopefully someone will be available for help in treatment and understanding.

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