



Cryptosporidiosis Fact Sheet for Clinicians



Agent

The etiologic agent of Cryptosporidiosis is *Cryptosporidium*, a protozoan parasite. Several species are infectious to humans but most infections are caused by *C. parvum*.

Symptoms

Severity and length of symptoms are correlated with immune status of the host. The parasite usually infects the intestinal tract. The infection may be asymptomatic or symptoms can include watery diarrhea, nausea, vomiting, anorexia, stomach cramps, and fever. Symptoms usually last for two weeks, but can last much longer in immunocompromised individuals. Extraintestinal infection can occur in persons with AIDS.

Transmission

Transmission occurs by the fecal-oral route. After an incubation period of about 7-12 days, infectious oocysts are shed in the feces. Transmission can occur through direct oral-fecal contact or can be fomite, food, or water (drinking or recreational) mediated. Transmission through anal/oral sexual contact and zoonotic transmission from farm animals can also occur.

High risk groups include:

- Household or sexual contacts of confirmed cases;
- Travelers to foreign countries, particularly to areas where water treatment infrastructure is less developed;
- Children attending day care centers and their household contacts;
- Healthcare and day care workers;
- Immunocompromised individuals.

Diagnosis

A stool sample must be submitted for microbiological analysis. Many labs do not routinely test for cryptosporidium oocysts when an ova and parasite exam is ordered; tests for cryptosporidiosis must be specifically requested.

Treatment

In late 2002 the FDA approved nitazoxanide to treat cryptosporidiosis in children 11 years old and younger. In 2005 this medication was additionally approved to treat cryptosporidiosis in immunocompetent adults. Most people with competent immune systems recover without treatment. In people with compromised immune systems cryptosporidiosis can be chronic and life threatening, and there is no approved treatment.

Prevention

To avoid infection patients should be advised to wash their hands after using the toilet, changing diapers, or having contact with domestic animals and before preparing food. Avoiding sexual contact with people who have diarrhea and avoiding ingesting recreational water (swimming pools, lakes, streams, ponds, hot tubs, and saunas) will also minimize spread. In places with inadequate water treatment it is important to boil water for one minute or use water filters that can filter out particles that are 1 micron in diameter.

Patients who have cryptosporidiosis should be counseled to wash their hands after using the toilet and



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before preparing food, and to avoid preparing food for others, sexual contact, and recreational water until two weeks after symptoms have resolved.

Importance of laboratory testing

Despite the lack of effective treatment, testing for cryptosporidiosis is important. Waterborne outbreaks of cryptosporidiosis have occurred in the U.S. If patients are not tested for cryptosporidiosis it is difficult for public health and water treatment workers to recognize that an outbreak is occurring and to take steps to mitigate the consequences. Second, although for most people cryptosporidiosis is a self-limiting illness, it can be life threatening to immunocompromised individuals. People who are unaware of their infection may not take the precautions necessary to prevent transmission of the parasite to their contacts, some of who may be immunocompromised.

Reporting

Cryptosporidiosis is reportable by laboratories under Title 17 of the California Code of Regulations.

Further Information

Reviews

- 1 Chen X, Keithly J, Paya C, LaRusso N. Cryptosporidiosis. NEJM. 2002;346:1723-31.
- 2 Clark D. New insights into human cryptosporidiosis. Clinical Microbiology Reviews. 1999;12:554-63.
- 3 White A, Flanigan T. Cryptosporidiosis. Current Treatment Options in Infectious Disease. 2003;5:301-6.

CDC Diagnostic Information: <http://www.dpd.cdc.gov/dpdx/HTML/Cryptosporidiosis.htm>