Isosporiasis is an abdominal disease caused by the protozoan Isospora belli. The organism infects the cells that line the small intestine, which can cause severe diarrhea and an inability to absorb nutrients.

Because the eggs of Isospora belli must mature outside the body, it is spread by feces and contaminated food and water contaminated. It’s also possible that oral-anal sex may spread the infection.

Isosporiasis is most common in tropical parts of the world and places where water contamination is a problem. It is quite rare in the United States and is an initial AIDS-defining illness in just 0.2 percent of people living with AIDS.

People with weakened immune systems (CD4 count below 200) are most at risk. It’s also important to distinguish the disease from other causes of debilitating diarrhea, such as cryptosporidiosis.

What are the symptoms, and how is it diagnosed?

Watery, usually non-bloody diarrhea is the main symptom. Other symptoms include abdominal pain, fever, cramping, nausea, vomiting, weight loss, loss of appetite, dehydration and passing gas (flatulence).

Most cases can be diagnosed using a stool sample to detect the organism under a microscope. Another way to diagnose isosporiasis is by colonoscopy, where samples of intestinal tissue are collected and examined in a lab.

How is it treated or prevented?

The most effective treatment for isosporiasis is a combo pill of trimethoprim and sulfamethoxazole (TMP-SMX; Bactrim, Septra, Cotrim). For most people, two double-strength TMP-SMX pills are taken twice a day for 7–10 days. For people with CD4 counts below 200 or who have persistent symptoms, one double-strength pill is taken four times a day for 3–4 weeks.

Unfortunately, between 25–50 percent of people living with HIV have allergic reactions, including fever and rash, to the sulfur in the SMX drug. Very often, it can be so severe that people need to stop taking it. In this case, pyrimethamine (Daraprim) can be taken once or twice a day for a month; and leucovorin (folinic acid) will also be prescribed. Ciprofloxacin is a third choice for
To help control the diarrhea, different anti-diarrheal drugs can be used. This includes: diphenoxylate (Lomotil), loperamide (Imodium), paregoric and Pepto-Bismol. NSAIDS (non-steroidal anti-inflammatory drugs) such as ibuprofen (Advil, etc.) can also help reduce inflammation. Thalidomide (Thalomid) also reduces diarrhea, although women who are or may become pregnant should avoid using it as it can cause severe birth defects. Women who are in their first trimester should not take loperamide.

The most effective way to prevent isosporiasis is to avoid its sources—mainly ingesting contaminated food or water, or human feces. This is true for those who are traveling to tropical and subtropical countries where isosporiasis is more common. Drinking bottled water and making sure that food is cooked properly can help reduce the risk. Washing your hands often can help prevent transmission.

Drugs can also be used to prevent isosporiasis, usually for people whose CD4 counts are below 200. Once CD4 counts are above 200 for six or more months, preventive meds can stopped. TMP-SMX is also used for prevention, but at a lower dose of three times per week. For those who are allergic to TMP-SMX, pyrimethamine or sulfadiazine can be prescribed.

Finally, an effective way to prevent isosporiasis is by starting or staying on effective HIV treatment. This helps the immune system prevent the disease from occurring. IRIS (immune reconstitution inflammatory syndrome) has not been reported with isosporiasis—a condition that causes increased symptoms of an opportunistic infection to happen due to starting or switching HIV treatment.

Are there any experimental treatments in development for isosporiasis?

If you would like to find out if you are eligible for any clinical trials involving new treatments for isosporiasis, visit ClinicalTrials.gov, a site run by the U.S. National Institutes of Health. The site has information about all HIV-related clinical studies in the United States. For more info, you can call their toll-free number at 1-800-HIV-0440 (1-800-448-0440) or email contactus@aidsinfo.nih.gov.

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