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Trypanosoma (Darwin’s disease)

By Tameem Moyassar
Trypanosoma is a genus of kinetoplastids (class kinetoplastida), a group of unicellular parasitic flagellate protozoa. The name is derived from the Greek trypano (borer) and soma (body) because of their corkscrew-like motion. All trypanosomes are heteroxenous (requiring more than one obligatory host to complete life cycle) and are transmitted via a vector. The majority of species are transmitted by blood-feeding invertebrates, but there are different mechanisms among the varying species.
When in the invertebrate host they are generally found in the intestine and, after transmission, they normally occupy the bloodstream or intracellular environment in the mammalian host. Trypanosomes infect a variety of hosts and cause various diseases, including the fatal human disease sleeping sickness, caused by *Trypanosoma brucei*, and chagas disease, caused by *Trypanosoma cruzi*.
Unicellular parasite

Trypanosoma cruzi

By

Hassan Hazim
Trypanosoma cruzi is a species of parasitic euglenoid trypanosomes. This species causes the trypanosomiasis diseases in humans and animals in America. Transmission occurs when the reduviid bug deposits feces on the skin surface and subsequently bites; the human host then scratches the bite area, which facilitates penetration of the infected feces. Human American trypanosomiasis, or Chagas disease, has two forms, a trypomastigote found in human blood and an amastigote found in tissues.
The acute form usually goes unnoticed and may present as a localized swelling at the site of entry. The chronic form may develop 10 to 20 years after infection. This form affects internal organs (e.g., the heart, the esophagus, the colon, and the peripheral nervous system). Affected people may die from heart failure. Acute cases are treated with nifurtimox and benznidazole, but there is currently no effective therapy for chronic cases.
Unicellular parasite

American trypanosomiasis

By Hussein Ali
Chagas disease, also known as American trypanosomiasis, is caused by infection with the protozoan parasite Trypanosoma cruzi. The organism T. cruzi and infection in humans were first described in 1909 by the Brazilian physician Carlos R. J. Chagas. T. cruzi is found mostly in blood-sucking triatomine insects (kissing bugs) and small mammals in a sylvatic cycle that is enzootic from the southern and southwestern United States to central Argentina and Chile.
T. cruzi infection in humans occurs in a spotty distribution throughout the range of the sylvatic cycle. New cases of vector-borne T. cruzi infection usually occur in persons who live in primitive houses in an area where the sylvatic cycle is active. The living quarters are invaded by infected triatomines, which become domiciliary.

Infected insects take blood meals from humans and their domestic animals and deposit parasite-laden feces. The parasites are then transmitted via contact with breaks in the skin, mucosal surfaces, or the conjunctivas. Transmission can also occur congenitally or via blood transfusion or organ transplantation. T. cruzi infection is life-long. A minority of persons with long-standing T. cruzi infection develop the serious cardiac and gastrointestinal problems that characterize chronic symptomatic Chagas disease.
Unicellular parasite

Entamoeba Histolytica

By Jassim adnan
Entamoeba histolytica * is a protozoan parasite (single-celled microscopic animal) responsible for a disease called amoebiasis. It occurs usually in the large intestine and causes internal inflammation as its name suggests (histo = tissue, lytic = destroying). 50 million people are infected worldwide.
Inside humans Entamoeba histolytica lives and multiplies as a trophozoite. Trophozoites are oblong and about 15-20 µm in length. In order to infect other humans they encyst and exit the body.

The life cycle of Entamoeba histolytica does not require any intermediate host. Mature cysts (spherical, 12-15 µm in diameter) are passed in the feces of an infected human.
Another human can get infected by ingesting them in fecally contaminated water, food or hands. If the cysts survive the acidic stomach, they transform back into trophozoites in the small intestine.

Trophozoites migrate to the large intestine where they live and multiply by binary fission.
Both cysts and trophozoites are sometimes present in the feces. Cysts are usually found in firm stool, whereas trophozoites are found in loose stool. Only cysts can survive longer periods (up to many weeks outside the host) and infect other humans.

If trophozoites are ingested, they are killed by the gastric acid of the stomach. Occasionally trophozoites might be transmitted during sexual intercourse.
Unicellular parasite

Entamoeba Histolytica

By Bahaa’ wa’dullah
* The parasites can also penetrate the intestinal wall and travel to organs such as the liver via bloodstream causing extraintestinal amoebiasis. Symptoms of these more severe infections include:

* anemia
* appendicitis (inflammation of the appendix)
* bloody diarrhea
* fatigue
* fever
* gas (flatulence)
* genital and skin lesions
* intermittent constipation
* liver abscesses (can lead to death, if not treated)
* malnutrition
* painful defecation (passage of the stool)
* peritonitis (inflammation of the peritoneum which is the thin membrane that lines the abdominal wall)
* pleuropulmonary abscesses
* stomach ache
* stomach cramping
* toxic megacolon (dilated colon)
* weight loss.
To prevent spreading the infection to others, one should take care of personal hygiene. Always wash your hands with soap and water after using the toilet and before eating or preparing food. Amoebiasis is common in developing countries. Some good practices, when visiting areas of poor sanitation:

* Wash your hands often.
* Avoid eating raw food.
* Avoid eating raw vegetables or fruit that you did not wash and peel yourself.
* Avoid consuming milk or other dairy products that have not been pasteurized.
* Drink only bottled or boiled water or carbonated (bubbly) drinks in cans or bottles.
thank u 4 listen ^_^