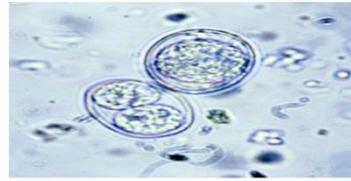




Oocysts of *Toxoplasma gondii*



Epidemiology of Communicable
Diseases

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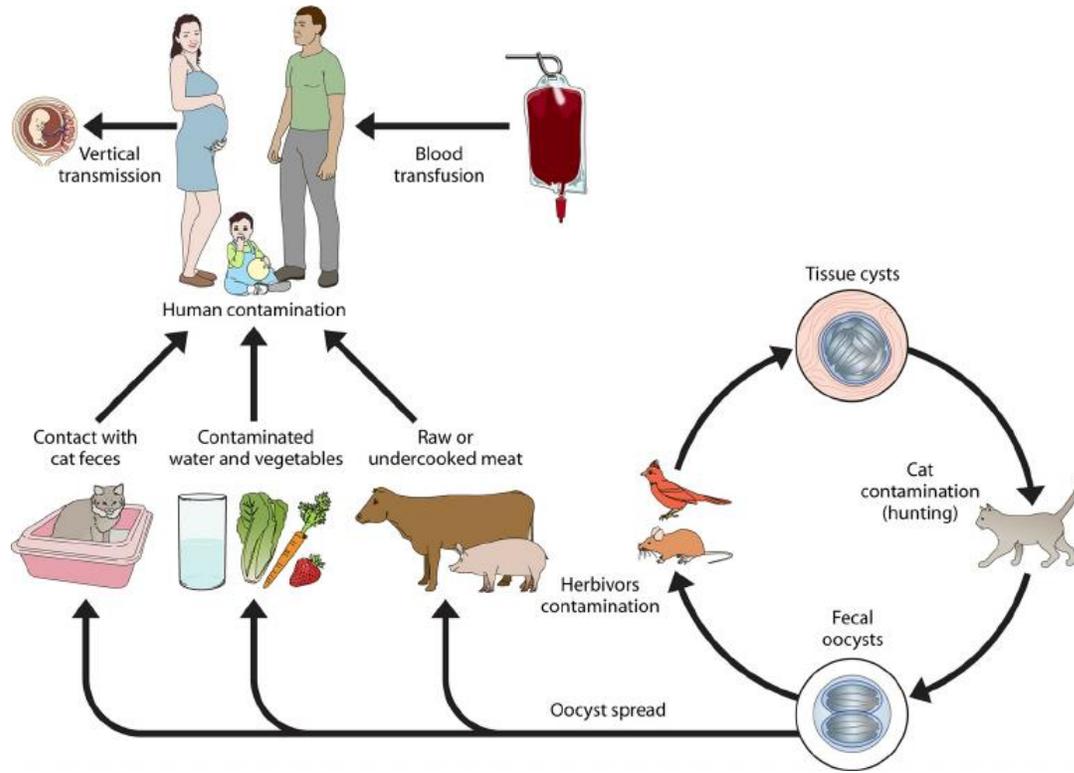
Toxoplasmosis

Toxoplasma gondii is a protozoan parasite, Domestic cats are the only known definitive hosts in which the parasite can undergo sexual reproduction.

In various places throughout the world, it has been shown that up to 95% of some populations have been infected with *Toxoplasma*. Infection is often highest in areas of the world that have hot, humid climates and lower altitudes. In a study in Iraq in Al-Khathmia Teaching Hospital 94% of pregnant women under study were sero positive IgM, IgG related to the parasite. Also studies in UK found 22% of pregnant women carries the parasite, and in India almost 60-65 % of pregnant women are seropositive.

I.P: 5-23 days

Causal Agent: *T. gondii*



M.O.T

- Foodborne; eating undercooked, contaminated meat.
- Ingesting water, soil, vegetables, or anything contaminated with oocysts shed in the feces of infected Cat.
- Drinking unpasteurized milk.
- Animal-to-human (zoonotic) Cats play an important role in the spread of toxoplasmosis. They become infected by eating infected rodents, birds, or other small animals.
- Mother-to-child, particularly when *T. gondii* is contracted during pregnancy (congenital).

Clinical feature:

Usually mild with "flu-like" symptoms (e.g., non-tender lymph nodes, myalgia, anorexia, sore throat, night sweats) that last for weeks to months and resolve. However, the parasite remains in their body in an inactive state. It can become reactivated if the person becomes immunosuppressed. Only 10-20% of toxoplasmosis cases in adults and children are symptomatic. Toxoplasmosis is a serious and often life-threatening disease in immunodeficient patients.

CNS toxoplasmosis occurs in 50% of patients - Seizure, focal neurologic deficit, headache, encephalitis, Myocarditis and pneumonitis are reported.

Congenital toxoplasmosis

This is most severe when maternal infection occurs early in pregnancy.

Approximately 67% of patients have no signs or symptoms of infection. T gondii –specific IgM antibodies at birth or early infancy.

Retinochoroiditis occurs in about 15% of patients. Infected newborns have anemia, thrombocytopenia, and jaundice at birth. Affected survivors may have mental retardation, seizures, visual defects, spasticity, hearing loss or other severe neurologic sequelae.

The prevalence of hearing loss is as high as 28% in children who do not receive treatment.

Diagnosis:

The most commonly used tests to measure IgG antibody are the Sabin–Feldman dye test, the ELISA, the IFA, and the modified direct agglutination test. IgG antibodies usually appear within a week or two of infection.

Prevention

- Freeze meat and cook food well.

- wash fruits and vegetables before eating.
- Wash cutting boards, dishes, counters, utensils, and hands with hot soapy water after contact with raw meat, seafood, or unwashed fruits or vegetables.
- Avoid drinking untreated drinking water.
- Wear gloves during any contact with soil.
- Hand washing specially children.
- Avoid cat in house with pregnant women.

No approved human vaccine exists against *Toxoplasma gondii*.

For sheep there is available an approved live vaccine called 'Toxovax' which provides lifetime protection.

Treatment:

tissue cysts remain resistant to drugs. Treatment of toxoplasmosis in cats is important for the prevention of transmission to humans

The recommended treatment for acute toxoplasmosis in humans is with a combination of the anti-malarial medication pyrimethamine and the antibiotic sulfadiazine

Toxoplasmosis and Schizophrenia???