

TOXOPLASMOSIS

- Definitive host of *Toxoplasma gondii* = members of the cat family
- When cats ingest either oocysts or tissue cysts, viable organisms ("bradyzoites") are released and invade the cells of the intestine.

A cycle of sexual differentiation occurs → zygote → oocyst shed in faeces.

- ▶ Oocyst is not initially infectious, but matures in the soil.
- ▶ When other animals ingest oocysts, viable organisms ("bradyzoites") are released and invade the cells of the intestine. However, no sexual cycle occurs. Asexual multiplication results in a form of the organism ("tachyzoite") that migrates throughout the body, invades tissues (especially muscle and brain) and forms cysts. These cysts persist for the life of the animal.
- ▶ Humans acquire infection by ingestion of
 - i. Oocyst in soil contaminated by cat faeces
 - ii. Tissues cysts in meat

The relative importance of these 2 sources is not known.

Infection in the Immunocompetent Host

- Usually asymptomatic
- In adults, 10% - 25% of acute infections are symptomatic
- Acute mononucleosis syndrome with lymphadenopathy.
- Diagnosis by serology
- Course is benign and self-limited ∴ no therapy

Infection in the Immunocompromised

- Usually a meningoencephalitis
- Other organs may be involved
- Most cases due to reactivation of pre-existing cysts
- Diagnosis of encephalitis usually by imaging

Congenital Infection

- * Results from acute infection, usually asymptomatic, during pregnancy
- * Clinical manifestations are variable:
 - i. TORCH syndrome
 - ii. Delayed appearance of neurological sequelae
 - iii. Ocular toxoplasmosis (often bilateral)
- * Although most cases are due to congenital infection, they are often asymptomatic until the second or third decade of life.
- * Acute disease may result in ocular disease (usually unilateral)
- * The lesion in the eye is fairly characteristic
- * Relapse is common even after therapy

Therapy

- * Pyrimethamine and sulphonamide combination (high dose) with folinic acid to protect bone marrow
- * Pyrimethamine teratogenic