Ocular Toxoplasmosis

Ocular toxoplasmosis is usually a clinical diagnosis. Laboratory investigations are undertaken to support the clinical diagnosis or help when the clinical presentation is atypical. This can be due to infection acquired congenitally but may be the result of postnatal infection.

In reactivated infection (usually congenital) antibody levels are often not raised and IgM is not detected. Serological tests are not diagnostic and are used to confirm previous exposure to *Toxoplasma gondii* or to exclude the disease. A sensitive and specific test e.g. dye test is important as a negative result (<2IU/mL) can exclude disease. Antibody levels may be low even during episodes of acute eye disease and a positive result (≥2IU/mL) supports the clinical diagnosis. This is particularly useful in countries like the UK where >80% of the normal population do not have toxoplasma antibody.

When ocular fluid and matched serum are available, ocular toxoplasmosis can be confirmed by demonstration of intraocular production of specific toxoplasma antibody. A ratio of *Toxoplasma gondii* specific antibody in the ocular fluid versus serum (Goldmann–Witmer coefficient) greater than 3 is generally accepted as consistent with active ocular toxoplasmosis. Comparative Western blotting of ocular fluid and serum can also be used to demonstrate local antibody production.

The direct detection of *Toxoplasma gondii* DNA in ocular fluid by PCR is considered to be confirmation of active eye disease. A negative result does not exclude ocular toxoplasmosis.

Less commonly ocular symptoms may be associated with acute toxoplasma infection and a number of outbreaks have been described. In acute infection antibody levels are raised and specific IgM will be detected.

**Reference**
