

Birmingham and Midland Eye Centre

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OPHTHALMIC INFECTIONS**Guidelines for the management of Ocular Toxoplasmosis**

Toxoplasmosis accounts for 30-50% of all posterior uveitis. The primary lesion is a retinitis with an inflammatory reaction in the choroid.

Symptoms are that of unilateral floaters +/- reduced vision.

1. Diagnosis

This is made predominantly on clinical grounds. Serum toxoplasma titres are only helpful if they are negative, to exclude the diagnosis. The exception to this is that positive IgM titres indicate a recently acquired infection. PCR of aqueous and/or vitreous is helpful in doubtful cases.

2. Signs

- Anterior chamber: this is often quiet. Occasionally there is a non-granulomatous or granulomatous iridocyclitis.
- Vitritis: this is often severe, particularly over the retinal lesion and may prevent visualisation of the fundus.
- Fundus: most commonly there is a focal necrotising retinitis adjacent to the edge of an old inactive scar. The post-equatorial fundus is most commonly affected. The active retinitis is usually yellow-white with fluffy edges and is associated with an overlying vitritis. Other fundal signs are much less common: deep retinitis (without an overlying vitritis), multifocal punctate outer retinal lesions, granulomas, papillitis.

3. Treatment

Not all active lesions need treatment. Foci are self-limiting and can be innocuous. The main indications for treatment are:

- Lesion involving or threatening the macular or papillomacular bundle
- Lesion involving or threatening the optic nerve head
- Severe vitritis that has severely reduced the vision and may subsequently cause vitreous fibrosis +/- a tractional retinal detachment.
- All lesions in immunocompromised individuals

There is no good evidence of superior efficacy of one therapeutic regime over another, but the treatment options are:

- For adults and children over 5 years:

Oral pyrimethamine (non-formulary, requires DTC approval) 100 mg loading dose, followed by 25 mg twice daily), with oral sulfadiazine (non-formulary, requires DTC approval) 2 g loading dose, followed by 1 g four times daily), plus oral calcium folinate (15 mg once daily every three days)

Oral co-trimoxazole 960 mg twice daily (second line with microbiology approval) for adults and children over 12 years):

480 mg twice daily (6-12 years),
240 mg twice daily (6 months to 5 years),
120 mg twice daily (6 weeks to 5 months)

Oral clindamycin 300 mg four times daily (for adults and children over 12 years)

6 mg/kg four times daily for children 1 month to 12 years
with oral sulfadiazine (2 g loading dose, followed by 1 g four times daily), which reduces the risk of clindamycin-induced pseudomembranous colitis, by reducing the risk of clostridial overgrowth.

All regimes should be administered for a minimum of three weeks. Except in immunocompromised patients, oral prednisolone should be commenced on the same day as antibiotic therapy, starting at 40 – 60 mg daily (0.5 – 1.0 mg/kg) and tailing off completely over the period of treatment.

- In pregnancy
 - Decide whether the ocular disease needs treatment in the normal way
 - If treatment required give oral clindamycin 300 mg four times daily for 3-4 weeks
 - Assess whether infection is recently acquired by doing toxoplasma IgM
 - If IgM is positive protect the foetus using oral spiramycin (non-formulary, requires DTC approval) 1 g three times daily for the duration of pregnancy in liaison with the obstetricians
 - Laser photocoagulation may be considered
- In lactation
 - Decide whether the ocular disease needs treatment in the normal way
 - If treatment required use oral clindamycin 300 mg four times daily for 3-4 weeks but stop therapy if the baby gets diarrhoea and consult microbiology for possible alternative options

4. Reference

Wakefield D, Cunningham ET Jr, Pavesio C, Garweg JG, Zierhut M. Controversies in ocular toxoplasmosis. *Ocul Immunol Inflamm.* 2011 Feb;19(1):2-9.

Drugs marked in **red** contain penicillin, and are contra-indicated in penicillin allergy; drugs marked in **orange** can cause allergic reactions in penicillin allergic patients, and must be avoided if there is any history of anaphylaxis to penicillin; drugs marked in **green** are safe in penicillin allergy. See Management of [Penicillin Allergy in Adults policy](#) on Trust intranet for full details.