Birmingham and Midland Eye Centre
Ophthalmic Guideline

GUIDELINES FOR THE MANAGEMENT OF OCULAR TOXOPLASMOSIS

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Group, Directorate and Specialty	Surgical Services, Ophthalmology
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Consultation process:

- Ophthalmology Governance Group
- Drugs and Therapeutic Committee

If review of existing guideline what has been changed:

- No changes

What National Guidance has been incorporated:

- None

Scope (who does the guidelines apply to or not apply to):

- All patients with ocular toxoplasmosis

DOCUMENT CONTROL AND HISTORY

Version No	Date Approved	Date of implementation	Next Review Date	Reason for change *(e.g. full rewrite, amendment to reflect new legislation, updated flowchart, etc.)*
1	October 2015	October 2015	October 2018	Full Review
2	September 2019	September 2019	September 2022	No Changes

Guideline for the Management of Ocular Toxoplasmosis

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Guidelines for the management of Ocular Toxoplasmosis

Toxoplasmosis is the most common infective cause of posterior uveitis. The primary lesion is a retinitis with an inflammatory reaction in the vitreous. Recurrences frequently occur and can be the result of congenitally or acquired infection.

Symptoms are that of unilateral floaters +/- reduced vision. Bilateral disease can be found in the severely immunocompromised i.e. AIDS.

1. Diagnosis

This is made predominantly on clinical grounds. Anti-toxoplasma antibodies are usually only helpful if they are negative, to exclude the diagnosis. The exception to this is that positive anti-toxoplasma IgM antibodies may indicate a recently acquired infection. PCR of aqueous and/or vitreous may be helpful in diagnostically challenging cases. In patients with a known history of toxoplasma retinochoroiditis and where the active focus of infection is clinically compatible with a recurrence, then treatment can be commenced immediately. In those cases where the diagnosis is in doubt then treatment should only be commenced after consultation with a uveitis consultant.

2. Signs

- Anterior chamber: there may be an associated anterior uveitis
- IOP: this may be raised (>21 mmHg) or a large difference as compared with the fellow eye.
- 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, four quadrant retinal venous sheathing.

3. Treatment

Not all active lesions need treatment although many uveitis experts may treat every lesion. Small non-sight threatening foci are self-limiting and can be innocuous. The main indications for treatment are:

- Lesion involving or threatening the macula or papillomacular bundle
- Lesion involving or threatening the optic nerve head
- Severe vitritis that has severely reduced the vision.
- Lesions affecting a major retinal blood vessel
- All lesions in immunocompromised individuals

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

Systemic therapy*

Oral **co-trimoxazole** 960 mg twice daily 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)

OR
Oral **azithromycin** 500 mg one daily (for adults and children with a body weight above 45 kg, unlicensed use). Children over 1 year 10 mg/kg once daily

OR
Oral **pyrimethamine** (non-formulary, requires DTC approval)
100 mg loading dose, followed by 25 mg twice daily (For adults and children over 5 years) in combination with one of the following:

- 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). Check for G6PD deficiency before prescribing; or

- Oral **clindamycin** 300 mg four times daily (for adults and children over 12 years); 6 mg/kg four times daily for children under 12 years

OR
Oral **atovaquone** 750 mg four times daily (for adults, unlicensed use)

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 (or after 3 days depending on clinician preference), starting at 40–60 mg daily (0.5–1.0 mg/kg) and tailing off completely over the period of treatment.

OR
Intravitreal therapy:
Intravitreal **clindamycin** 1 mg in 0.1ml and intravitreal dexamethasone 400 micrograms in 0.1ml (unlicensed use, available on request only, 2 working days' notice required)

(in some cases dexamethasone can be omitted)

- In pregnancy

    - Decide whether the ocular disease needs treatment
    - If treatment required give oral **clindamycin** 300 mg four times daily or **azithromycin** 500 mg daily for 3–4 weeks or intravitreal **clindamycin**
    - Assess whether infection is recently acquired by doing toxoplasma IgM
    - If IgM is positive protect the fetus 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 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.

*Doses are based on normal renal function and may require adjustment in renal impairment.
Drugs marked in **green** do not contain penicillin and are safe in penicillin allergy.

4. References

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