



Trachoma

(Ratings: A: Most important, B: Moderately important, C: Relevant but not critical

Strength of Evidence: I: Strong, II: Substantial but lacks some of I, III: consensus of expert opinion in absence of evidence for I & II)

Initial Exam History

- Living in a trachoma-endemic region **(A:I)**
- Duration of red eye (an acute follicular conjunctivitis may be due to other organisms) **(C:III)**
- Any previous similar episodes (active trachoma is often recurrent) **(C:III)**
- Household contacts with history of trachoma or chronic conjunctivitis **(B:I)**
- Purulent discharge (although active trachoma is often sub-clinical or asymptomatic) **(C:III)**
- Duration of trichiasis **(C:III)**
- History of previous lid surgery **(A:III)**

Initial Physical Exam

- Using 2.5x magnification loupes and adequate lighting (daylight or torchlight) or using a slit lamp, assess signs of trachoma using the WHO simplified grading scale:
www.who.int/ncd/vision2020_actionplan/documents/Simplifiedgradingoftrachoma.PDF
(A:III)
- Briefly, note any trichiasis or corneal opacity. Evert the upper palpebral conjunctivae and note follicles over the tarsal plate (5 follicles greater than 0.5 mm in the central tarsus constitutes the WHO grade of TF), intense inflammatory thickening obscuring 50% of the normal, underlying conjunctival vasculature (TI), and easily visible scarring (TS).

Diagnostic (Laboratory) Tests

- PCR testing for chlamydial DNA—this is the gold standard for identifying infection but not for diagnosing trachoma **(B:I)**
- Direct Chlamydial Immunofluorescence test +/- chlamydial culture of conjunctival epithelial cells **(C:II)**
- Chlamydial culture (difficult to perform) **(C:II)**
- Giemsa stain of conjunctival scrape to look for:
 - Basophilic intracytoplasmic inclusion bodies in epithelial cells **(C:III)**
 - Polymorphonuclear leucocytes **(C:III)**

Management

- **Management of trachoma should be community based. The WHO recommends the integrated SAFE Strategy, surgery for trichiasis, community wide antibiotic**

- treatment, facial cleanliness education and environmental improvements (B:III)**

 - Surgical: Trichiasis surgery (bilamellar tarsal rotation or the related Trabut procedure) should be considered if any of the following are present:
 - one or more in-turned eyelashes are abrading the cornea when the patient is looking straight ahead **(A:II)**
 - pre-existing evidence of corneal damage from trichiasis **(B:II)**
 - severe discomfort from trichiasis **(C:III)**
 - Contra-indications to trichiasis surgery include defective lid closure, children with trichiasis (may need general anesthetic), and poor general health. **(C:III)**
 - Epilation is considered an alternative for refusal to have surgery **(B:III)**
 - Community-wide antibiotic treatment is recommended if there is >10% active trachoma in children aged 1-9 years of age in the community. Targeted treatment of clinically active cases is recommended for a lower prevalence. Household contacts, and in particular, siblings, may also be treated, even if they have no active signs of infection **(B:II)**
 - The following antibiotic treatment is recommended by the WHO:
 - Single dose azithromycin: in children aged <16 years dosage is 20mg/kg (maximum dose 1g); in adults dosage is 1g **(A:I)**
 - Or, use topical 1% tetracycline eye ointment in pregnant women, children aged below 6 months and those allergic to macrolides, used twice daily in both eyes for 6 weeks **(A:I)**
 - It is acceptable to treat follicular conjunctivitis in a trachoma-endemic area with antibiotics even without laboratory documentation of active chlamydial infection **(A:I)**
 - Facial Cleanliness: promote regular face-washing with clean water. Clean faces have been associated with clinically active trachoma, but it should be noted that face-washing interventions have not been shown to reduce ocular chlamydial infection **(B:II)**
 - Environmental Improvements: (improving water supply, latrine provision and fly control). The face fly *Musca sorbens* has been implicated as a possible vector for trachoma and breeds preferentially on human feces. These flies cannot breed in latrines, so latrine construction is thought to reduce fly populations and trachoma transmission **(B:II)**

Follow-up Evaluation

- **WHO recommends annual, community based treatment with reassessment at three years. (B:II)**
- Note that follicles can take months to clear even after infection has been eliminated, and that re-treatment may not be warranted if follicles are slowly improving depending on the time that has elapsed since the last treatment was given. **(B:II)**
- **For treatment of individual more frequent examinations can be undertaken. Follow-up 1 month after treatment, with retreatment as necessary is reasonable.**
- Re-infection frequently occurs in endemic areas, so patient education regarding methods that may reduce transmission is useful. **(C:III)**
- After trichiasis surgery, patients should be seen within 2 weeks for suture removal, and annually to ensure that trichiasis has not returned. **(A:III)**

* Adapted from the American Academy of Ophthalmology Summary Benchmarks, November 2010 (www.aao.org)

