

Overview of Reviews

***The Cochrane Library* and trachoma: an overview of reviews**

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Background

Description of the condition

Trachoma is the leading infectious cause of blindness worldwide. Recurrent infection by the bacterium *Chlamydia trachomatis* produces a chronic keratoconjunctivitis (inflammation affecting both the conjunctiva and cornea) referred to as Acute Trachoma. The infection is spread from person to person by direct contact with the eye, or by contact with contaminated objects (1). The repeated cycle of infection and inflammation causes the inner surface of the upper eyelid to call. Progressive scarring results in distortion and shortening of the inner side of the eyelid. As the lid margin turns inward (entropion) it causes the eyelashes to rub against the inner surface of the eye, a condition known as trachomatous trichiasis. This condition can damage the cornea by direct trauma and secondary bacterial infection, unless corrected surgically, by rotating the lid margin and lashes away from the eye. Without surgical correction, blinding corneal opacification can develop (2). Although trachoma is easily controlled, blindness from trachoma is essentially irreversible.

The World Health Organization (WHO) lists the national trachoma prevalence estimates for 52 endemic countries (<http://globalallianceforblindness.org>): approximately 460 million people are at risk for blinding trachoma; 63 million have acute trachoma; and 9.5 million have unoperated trichiasis. It has also been estimated that trachoma is responsible for 3.6% of global blindness (approximately 1.3 million people) making it the world's leading cause of preventable blindness (3).

Description of the interventions

WHO has adopted an integrated control strategy to prevent blindness from trachoma and to control trachoma transmission. The strategy has the name 'SAFE' and consists of: Surgery to correct trachomatous trichiasis; Antibiotic to treat acute infection and reduce the community level of infection; and Facial cleanliness and Environmental change to prevent transmission by modifying factors such as (4,5).

How the interventions might work

Surgery is, in all the components of the SAFE strategy to be implemented, a surgical procedure to correct corneal damage from progressing and hence prevent blindness in the eye as immediate risk, before irreversible corneal opacification has occurred (6). Epilation (plucking the eyelashes) and eyelid flipping (forcing the eyelashes back to the correct position and holding them in a sticking plaster) can be used in lieu of surgery, although the long-term effectiveness of the intervention in preventing blindness is not certain. The most common surgical procedures are bilamellar tarsal rotation (Billhickner

incision through the eyelid), posterior lamellar tarsal rotation (incision only through the tarsal plate and conjunctiva) and tarsal advancement and rotation (incision in the tarsal plate and rotation of the eyelid portion, in which the upper part of the tarsus is separated from the anterior lamella and advanced) (6). All of the surgical procedures refer to the inner surface of the eyelid. The characteristic of trachoma, trichiasis, which are referred to their original, outward-pointing position.

For treatment with an antibiotic, the WHO currently recommends either (a) 1% tetracycline eye ointment twice a day for 1 week applied topically on the inner surface of the lower eyelid, or (b) a single oral dose of a tetracycline (1000 mg for an adult and 20 mg/kg for children) (7). An antibiotic effective against trachoma infection and are used for both individual treatment

Interventions for
trachoma trichiasis (6)

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Adults

- Bilamellar tarsal rotation
- Bilamellar tarsal rotation
- Tarsal advance and rotation
- Eversion splinting
- Tarsal advance
- Tarsal grooving
- Electrolysis, cryotherapy or bilamellar tarsal rotation
- Bilamellar tarsal rotation
- Tarsal advance and rotation
- Epilation (manual removal of eyelashes)
- Posterior lamellar tarsal rotation, tetracycline and azithromycin
- Providing surgery in participants' own village
- Surgery by non-ophthalmologist integrated eye care workers

- Posterior lamellar tarsal rotation
 - No control group, participants randomized to one of three operations
 - No control group, participants randomized to one of five operations
 - Tarsal advance and rotation
 - Tarsal advance with buccal mucosal membrane graft
 - Double-sided sticking plaster
 - Posterior lamellar tarsal rotation and tetracycline
 - Providing surgery in nearest health centre
 - Surgery by ophthalmologists
- Primary
- Recurrence of trichiasis
- Secondary
- Visual acuity
- Acceptance of treatment

Table II. Active Trachoma (TF or TI)

Author/year	Intervention and comparison	No. subjects	Control group risk [baseline risk]	Risk difference (95% CI)	Relative risk (95% CI)	Comments
Antibiotics studies						
Oral antibiotics versus control group						
Darougar 1980b (25)	Treatment: oral doxycycline, one dose per month for 12 months Comparison: vitamin pills 1 dose per month for 12 months	3 mo. 91	72.3%	0.00 (-0.18, 0.19)	1.01 (0.78, 1.29)	Household treatment
Dawson 1969i (26)	Treatment: oral trisulphapyrimidines 3 daily during 3 consecutive weeks Comparison: lactose-placebo 3 daily for 3 consecutive weeks	12 mo. 91	70.2%	-0.16, (-0.35, 0.04)	0.78 (0.56, 1.08)	
Dawson 1969ii (26)	Treatment: oral trisulphapyrimidines 3 daily during 3 consecutive weeks Comparison: lactose-placebo 3 daily for 3 consecutive weeks	12 mo. 36	83.3%	-0.50 (-0.78, -0.22)	0.40 (0.20, 0.79)	Only active trachoma cases treated
Foster 1966 (42)	Treatment: oral sulphamethoxyipyridazine once daily for 5 consecutive days every week for 3 weeks Comparison: no treatment	3 mo. 219	7.1%	0.00 (-0.19, 0.18)	0.93 (0.06, 13.54)	Only active trachoma cases treated
Hoshiwara 1973 (27)	Treatment: oral doxycycline once daily for 5 consecutive days every week up to 28 doses in 40 days Comparison: placebo once daily for 5 consecutive days every week up to 28 doses in 40 days	12 mo. 219 3 mo. 103	63.6%	-0.05 (-0.16, 0.05) 0.08 (-0.04, 0.20)	0.93 (0.82, 1.07) 1.12 (0.93, 1.35)	Only active trachoma cases treated
Shukla 1966 (43)	Treatment 1: topical sulphafurazole + sulphadimethoxine twice daily for 5 consecutive days every month for 5 months/bi-weekly for 5 months Treatment 2: sulphadimethoxine biweekly or weekly dose for 5 months Comparison: no treatment	3 mo. 125	85.7%	-0.24 (-0.42, -0.07) -0.22 (-0.37, -0.07)	0.70 (0.53, 0.92) 0.74 (0.61, 0.91)	Only active trachoma cases treated Treatments were pooled and compared with control Only active trachoma cases treated Treatments were pooled and compared with control
		12 mo. 125	83.3%	-0.40 (-0.55, -0.24)	0.52 (0.39, 0.69)	

Topical antibiotic versus control group

Atitah 1973 (44)

Treatment 1: topical tetracycline derivative once every school day for 11 weeks

Treatment 2: topical terramycin once every school day for 11 weeks

Comparison: no treatment

Treatment: topical

oxytetracycline twice daily for 7 consecutive days every month for 12 months

Comparison: vitamin pills 1 dose per month for 12 months

Treatment: topical tetracycline 3 times daily on 5 consecutive days every week for 6 weeks

Comparison: no treatment

Peach 1986 (22)

Treatment: topical oily tetracycline daily for 5 days once a month for 3 months

Comparison: no treatment

Treatment 1: topical

sulphafurazole + oral sulphadimethoxine twice daily for 5 consecutive days every month for 5 months/bi-weekly for 5 months

Treatment 2: topical

sulphafurazole twice daily for 5 consecutive days every month for 5 months

Comparison: no treatment

Treatment: topical tetracycline twice daily for 6 consecutive days per week for 6 weeks

Comparison: no treatment

Woolridge 1967 (45)

Oral vs topical antibiotic

Bowman 2000 (24)

Treatment: oral azithromycin (single dose, 20 mg/kg)

Comparison: unsupervised

6 week course of topical

3 mo. 228	76.3%	-0.21 (-0.33, -0.09)	0.72 (0.60, 0.88)	Only active trachoma cases treated
3 mo. 85	72.3%	0.04 (-0.15, 0.23)	1.05 (0.82, 1.35)	Household treatment
12 mo. 85	70.2%	-0.20 (-0.41, 0.00)	0.71 (0.49, 1.03)	
3 mo. 213	82.2%	-0.08 (-0.19, -0.03)	0.91 (0.79, 1.04)	Only active trachoma cases treated
12 mo. 213	63.6%	-0.02 (-0.15, 0.11)	0.96 (0.78, 1.19)	
3 mo. 641	78.1%	-0.09 (-0.15, -0.02)	0.89 (0.81, 0.98)	Community-wide treatment
3 mo. 104	85.7%	-0.39 (-0.55, -0.23)	0.55 (0.41, 0.73)	Treatments were pooled and compared with control
12 mo. 104	83.3%	-0.27 (-0.44, -0.10)	0.68 (0.52, 0.88)	
3 mo. 322	85.8%	-0.17 (-0.26, -0.08)	0.80 (0.71, 0.90)	Only active trachoma cases treated
12 mo. 322	83.3%	-0.10 (-0.19, -0.01)	0.89 (0.79, 0.99)	

Table II. (C)

Author/year	Intervention and comparison	No. subjects	Control group risk [baseline risk]	Risk difference (95% CI)	Relative risk (95% CI)	Comments
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Darougar 1980b
(25)
Treatment: oral doxycycline one

Schachter 1999j (21)	Treatment: oral azithromycin once a week for 3 weeks (adults 1 g, children 20 mg/kg) Comparison: oxytetracycline once daily for 6 weeks	3 mo. 1600 12 mo. 1197	6.1% 15.7%	-0.01 (-0.04, 0.01) -0.07 (-0.11, -0.03)	0.76 (0.50, 1.15) 0.55 (0.40, 0.75)	Community-wide treatment. Country: The Gambia
Schachter 1999jii (21)	Treatment: oral azithromycin once a week for 3 weeks (adults 1 g, children 20 mg/kg) Comparison: oxytetracycline once daily for 6 weeks	3 mo. 2577 12 mo. 2276	19.2% 20.6%	0.03 (0.00, 0.06) 0.04 (0.01, 0.07)	1.16 (1.00, 1.36) 1.19 (1.02, 1.40)	Community-wide treatment. Country: Tanzania
Shukla 1966 (43)	Treatment: oral sulphadiazine biweekly or weekly dose for 5 months Comparison: sulphathiazole twice daily for 5 consecutive days every month for 5 months	3 mo. 125 12 mo. 145	85.7% 56.5%	-0.22 (-0.37, -0.07) -0.13 (-0.29, 0.03)	0.74 (0.61, 0.91) 0.77 (0.55, 1.07)	Treatments were pooled and compared with control
Tabbara 1996 (46)	Treatment: oral azithromycin (20 mg/kg) Comparison: topical tetracycline twice daily for 5 consecutive days per week over 6 weeks	3 mo. 64 6 mo. 56	37.5% 34.6%	0.09 (-0.15, 0.33) 0.02 (-0.23, 0.27)	1.25 (0.70, 2.23) 1.06 (0.52, 2.15)	Only active trachoma cases treated
Face washing and health education						
Face washing studies						
Peach 1987 (22)	Treatment 1: Tetracycline eye drops daily for one week every month for 3 months Treatment 2: Eye washing daily for 3 months Treatment 3: Tetracycline eye drops plus eye washing Comparison: No treatment	3 mo. 1143	75.8%	Eye drops -0.09 (-0.16, -0.01) Eye washing 0.02 (-0.06, 0.10) Eye drops + eye washing -0.07 (-0.15, 0.01)	Eye drops 0.88 (0.79, 0.98) Eye washing 1.02 (0.93, 1.13) Eye drops + eye washing 0.91 (0.82, 1.01)	No meta-analysis conducted as trials differed in several respects. All participants lost to follow up assumed to have 15% (0.15, 0.33) up-education

Table II. (C)

Author/year	Intervention and comparison	No. subjects	Control group risk [baseline risk]	Risk difference (95% CI)	Relative risk (95% CI)	Comments
Health Education Resnikoif 1995 (23)	Treatment: Health education one week per month for 6 months. Comparison: No health education	6 mo. 1810	7.1%	-0.03 (-0.06, 0.00)	0.59 (0.34, 1.04)	Comparisons were only done between one village and the control village.
Edwards 2006 (18)	Treatment: Communities targeted by NGOs and SAFE strategy (surgery, antibiotics, face washing, and environmental improvements) which received radio broadcasts and may have received video screenings. Comparison: Communities received radio broadcasts only	12 mo. 1842	66.7%	-0.04 (-0.09, 0.01)	0.94 (0.87, 1.01)	
Environmental studies Fly control interventions Emerson 1999 (15)	Treatment: spray with 0.175% volume to volume deltamethrin up to 20 m outside each village. Twice weekly in the wet season and once weekly in the dry season for 3 months. Comparison: No insecticide spray.	3 mo. 1134	15.7%	-0.10 (-0.10, -0.09)*	0.39 (0.27, 0.56)*	Both Emerson 1999 and Emerson 2004 assess insecticide spray but no meta-analysis conducted because of significant clinical heterogeneity.
Emerson 2004 (1)	Treatment: Spray with water soluble permethrin for 6 months. Comparison: No intervention	6 mo. 4850	6.2%	-0.04 (-0.04, -0.03)*	0.44 (0.33, 0.59)*	
West 2006 (16)	Intervention: All members of intervention balozi were given a single dose of azithromycin and then households and surrounding areas were sprayed with insecticide (10% permethrin in water) throughout the year. Comparison: All members of control balozi were given a single dose of azithromycin.	6 mo. 229 12 mo. 206	33% 44%	-0.13 (-0.25, -0.02)* -0.01 (-0.15, 0.13)*	0.60 (0.37, 0.96)* 0.97 (0.70, 1.34)*	Observations were on children aged <8 years. Observations were on children aged <8 years.
Latrine provision Emerson 2004 (1)	Treatment: Latrine provision Comparison: No intervention	6 mo. 2836	6.2%	-1.21 (1.22, -1.20)*	0.72 (0.53, 0.96)*	Analysis was by cluster, and not individual n = 7 in each group.

* The RR and RD is calculated in this review at the individual level without adjusting for clustering.

Table III. Severe trachoma

Table IV. (Continued)

Author/year	Intervention and comparison	No. subjects	Control group risk	Risk difference	Relative risk (95% CI)	Comments
Dawson 1969ii (26)	Treatment: oral trisulfapyrimidines 3 daily during 3 consecutive weeks Comparison: lactose-placebo 3 daily for 3 consecutive weeks	3 mo. 29	71.4%	-0.25 (-0.59, 0.10)	0.65 (0.35, 1.23)	
Hoshiwara 1973 (27)	Treatment: oral doxycycline once daily for 5 consecutive days every week up to 28 doses in 40 days Comparison: placebo once daily for 5 consecutive days every week up to 28 doses in 40 days	3 mo. 103	53.7%	-0.05 (-0.24, 0.15)	0.81 (0.63, 1.04)	
Oral versus topical antibiotic						
Dawson 1997 (28)	Treatment 1: oral azithromycin (1 dose of 20 mg/kg) Treatment 2: oral azithromycin (1 dose/week for 3 weeks) Treatment 3: oral azithromycin 1 dose every 4 weeks for 6 doses) Comparison: topical oxytet/polymyxin + oral placebo once daily for 5 consecutive days every 28 days for 6 times	3 mo. 160 12 mo. 138	7.3% 15.2%	-0.03 (-0.12, 0.06) -0.08 (-0.22, 0.05)	0.57 (0.14, 2.30) 0.44 (0.15, 1.29)	
Schachter 1999i (21)	Treatment: oral azithromycin once a week for 3 weeks (adults 1g, children 20 mg/kg) Comparison: oxytetracycline once daily for 6 weeks	3 mo. 1782 12 mo. 1914	4.5% 6.2%	-0.04 (-0.05, -0.02) -0.03 (-0.05, -0.01)	0.22 (0.11, 0.44) 0.48 (0.31, 0.74)	Community-wide treatment
Schachter 1999ii (21)	Treatment: oral azithromycin once a week for 3 weeks (adults 1 g, children 20 mg/kg) Comparison: oxytetracycline once daily for 6 weeks	3 mo. 1453 12 mo. 1126	13.6% 13.5%	-0.07 (-0.10, -0.04) -0.05 (-0.09, -0.01)	0.51 (0.37, 0.70) 0.62 (0.44, 0.87)	Community-wide treatment
Schachter 1999iii (21)	Treatment: oral azithromycin once a week for 3 weeks (adults 1 g, children 20 mg/kg) Comparison: oxytetracycline once daily for 6 weeks	3 mo. 2538 12 mo. 2236	6.2% 8.0%	-0.02 (-0.04, 0.00) 0.00 (-0.02, 0.02)	0.68 (0.49, 0.95) 1.01 (0.76, 1.35)	Community-wide treatment
Darougar 1980b (25)	Treatment 1: topical oxytetracycline twice daily for 7 consecutive days every month for 12 months Treatment 2: doxycycline one dose per month for 12 months Comparison: vitamin pills 1 dose per month for 12 months	3 mo. 82 12 mo. 82	2.6% 2.6%	0.13 (0.01, 0.25) -0.03 (-0.05, 0.00)	6.05 (0.78, 46.95) 2.59 (0.28, 23.88)	

Active Trachoma

Antibiotics and active trachoma

One review examined the antibiotic arm of the SAFE strategy by measuring the effect of antibiotic treatment on both acute trachoma and chronic infection of the conjunctiva (defined

as a positive nucleic acid amplification result from an ocular swab) (2). There are 15 included trials that randomized 8,678 participants and looked for the presence of acute trachoma at either three or 12 months after starting treatment. The review identified the analgesic of indomethacin, which received an antibiotic (topical or oral) versus placebo/no

rea men and ho e ho recei ed oral er, opical an ibio ic . Trial participan ere, i all re iden in area here rachoma i endemic, b ere from a n mber of differen co nrie and re ided in ari- a loca ion , incl ding illage and boarding chool . One ei of die randomi ed enire comm ni ie ra her than indi id al o he in eren ion (21). The WHO a rrenl recommend ei her opical e rac cline or oral a i hom cin for indi id al and mai rea men of rachoma, al ho gh he die ha e, ed ario i an ibio ic rea men regiment.

(A) A / S mmar a i ic co ld no be performed in die here oral and opical an ibio ic ere compar ed i h placebo or i h no rea men de o he degree of he erogenei .

(I) Ac i e rachoma a hree mon h

When mea ring he effec of rea men i h an ibio ic on ac i e rachoma a hree mon h , the poin ei ima e ere con i en i h he an ibio ic ha ing an effec i h a ri k red c ion. The re, ere a follo :

- (a) an an ibio ic
 - (i) $RR < 1$ in i rial ($P < 0.05$)
 - (ii) $RR < 1$ in io rial (non igni can (n. .))
 - (iii) $RR > 1$ in one rial (n. .)
- (b) oral an ibio ic
 - (i) $RR < 1$ in hree rial ($P < 0.05$)
 - (ii) $RR < 1$ in io rial (n. .)
 - (iii) $RR > 1$ in one rial (n. .)
- (c) opical an ibio ic
 - (i) $RR < 1$ in fo r rial ($P < 0.05$)
 - (ii) $RR < 1$ in one rial (n. .)
 - (iii) $RR > 1$ in one rial (n. .)

(II) Ac i e rachoma a 12 mon h

The rela e rik of id participan e hibing ac i e rachoma a 12 mon h a er rea men i h an ibio ic ere con i en i h here being no effec of an ibio ic a 12 month. The re, l are a follo :

- (a) an an ibio ic
 - (i) $RR < 1$ in hree rial ($P < 0.05$)
 - (ii) $RR > 1$ in hree rial (n. .)
- (b) oral an ibio ic
 - (iii) $RR < 1$ in one rial ($P < 0.05$)
 - (i) $RR < 1$ in one rial (n. .)
 - () $RR > 1$ i(1 in one rial (n. .)

< 0.

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West 2006 (19)	<p>2) Unilamellar surgery and unsupervised tetracycline eye ointment twice a day for 2 weeks</p> <p>1) Trichiasis surgery followed by 1g of oral azithromycin for the patient or single-dose azithromycin (20 mg/kg up to 1g) for the patient and all household members</p> <p>2) Trichiasis surgery followed by twice per day topical tetracycline for six weeks</p> <p>1) Bilamellar tarsal rotation surgery and a single dose of azithromycin immediately after surgery</p> <p>2) Bilamellar tarsal rotation surgery and placebo administered at 4.1 (elime)(er5.5(rTI(-280)-5.2(20)-283.5(m)-5.azithru50)-283-4.)8)3.7)-276.8(>ose(household azithromycin),</p>	When recurrence was detected or at 12 mo. 1406	-0.03 (-0.06, -0.01)	0.53 (0.33, 0.85)	Mean ages were 50 (household azithromycin), 48.5 (patient only azithromycin), and 48 (tetracycline)
Zhang 2006 (20)					

Oral antibiotics versus topical antibiotics

There were three trials comparing oral versus topical antibiotic monotherapy in the reduction of relapse risk. A trial found in three of the four trials that compared a 12-month course of oral antibiotic therapy with the four-week course of topical antibiotic therapy (21,28). A 12-month course of oral antibiotic therapy had a higher relapse rate (21,28). The first trial compared oral doxycycline with topical erythromycin and found a non-significant increase in both three and 12 months (25).

Process indicators

Acute and severe trachoma and evidence of infection with *C. trachomatis* are the endpoints of monitoring and have been defined above. However, the relative value of a process indicator (clean face and eye contact) has not been established and are reported in the narrative below.

Clean faces

In the only face-washing trial that addressed this outcome, the percentage of children with clean faces increased in both the combination face-washing plus antibiotic pill and the antibiotic alone pill, in comparison to the control (17). The effect was greater in the face-washing plus antibiotic combination pill compared to the antibiotic alone group: 19% at baseline; 30% at 1 month; and 26% at 12 months. The difference between the groups was statistically significant ($P < 0.05$).

Fly-eye contact

To reduce the mean frequency of eye contact with a process indicator (1,15). The first trial reported that eye contact with the trachoma vector, *C. trachomatis*, decreased by 96% in the community-wide spraying of deltamethrin in comparison to control. The second trial reported a reduction in eye contact with the vector of 88% in the community-wide insecticide spraying with permethrin, and a 30% reduction in illness had reduced the risk of infection compared to control. All three reductions were statistically significant ($P < 0.05$).

Trichiasis surgery

The antibiotic, face-washing and environmental components of the SAFE strategy are used to control the trachoma transmission. The surgical component aims to correct trachoma-related trichiasis, which occurs as a result of repeated cycles of infection and resolution of ocular surface infection; it

not, in itself, caused by trachoma. The primary cause of trichiasis is the scarring of the eyelids after infection. See Table IV for details from the surgical trial.

Surgery techniques

In one trial, there was no significant difference in the relapse rate at three months between the bilamellar tarsal rotation and the external oblique muscle transposition (similar to Trabeculectomy) (29). In another trial, bilamellar tarsal rotation was more effective than tarsal adhesion and rotation RR: 0.53 (0.27, 1.06), tarsal grooving RR: 0.35 (0.17, 0.75), external oblique muscle transposition RR: 0.32 (0.15, 0.68) or tarsal adhesion RR: 0.32 (0.15, 0.66) (30). In a third trial, however, bilamellar tarsal rotation was more effective in reducing the number of minor trichiasis (one or less than six) than the external oblique muscle transposition RR: 0.19 (0.09, 0.40) (31). In the other major trichiasis (six or more than six) trial, bilamellar tarsal rotation was more effective than tarsal adhesion and rotation RR: 0.40 (0.25, 0.64). There was a high attrition rate of patients who came in for the trichiasis surgery.

Non-operative treatment of trichiasis

At three months, one trial found that waxing or electrolysis alone was more effective than epilation alone RR: 0.29 (0.15, 0.56) (32). The difference between epilation alone and waxing or electrolysis was not statistically significant ($P = 0.5$). The authors reported good clinical outcomes: no trichiasis, complete eyelid closure, no conjunctival hyperaemia and no unplanned re-operations.

Post-operative antibiotic treatment

Three trials have examined the effect of post-operative antibiotic monotherapy on the relapse of trichiasis (19,20,33). Two of the trials were published before the last update of the review (20,19). One trial found no difference in trichiasis relapse rate between patients who had received post-operative antibiotic monotherapy (41.2%) and those who did not (41.4%) at 12 months (33). Another trial found no difference in the relapse rate between trichiasis relapse rate between the antibiotic monotherapy group (29.8%) and the placebo group (28.1%) at 12 months (20). Additionally, a meta-analysis suggested that there may be some benefit from antibiotic monotherapy for individuals who had major trichiasis. The third and largest trial concluded that a single dose of antibiotic monotherapy was associated with a 33% reduction in trichiasis relapse, compared with a 6-week regimen of topical erythromycin (19).

The uptake of ivermectin is often disappointing, particularly among women. However, a disproportionately high burden of disease. The barrier to ivermectin probably varies and needs to be addressed in different regions. Strategies designed to overcome these, especially for women in rural areas, need to be developed.

Antibiotics

Mass antibiotic distribution programs are being evaluated in many trachoma endemic countries. For ethical reasons, it is unlikely that there will ever be a trial comparing ivermectin with placebo here. However, a recent meta-analysis (oral azithromycin and topical tetracycline) probably has some effect. However, there is a pressing need for evidence to help optimize their use. I remain uncertain how long they should be given, how often and for how long. Comparative trials of different distribution strategies are needed. Given the high burden of clinically active trachoma can persist long after the infection has been cleared by antibiotic, there is potentially a role for a long-term program of care to prevent the infection or determine whether communities need an ongoing treatment program.

Facial cleanliness

The combination of a suitable material and observational data is considered sufficient to arrange the combination of hygiene promotion and face washing in trachoma control programs. However, a repeat of the original face washing trial has included a procedure indicator, azithromycin treatment and face washing, and has had both clinical and microbiological endpoints. It should be remembered. Tgc-585cgc-5855end

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