Summary of findings:

34. Topical quinolone antibiotic compared to topical antiseptic for chronic suppurative otitis media

Patient or population: Children and adults with chronic suppurative otitis media.

Setting: Primary health care

Intervention: Topical quinolone antibiotic (Studies used: Ofloxacin 3 drops, three times daily and Ciprofloxacin 3-6 drops twice to three times daily.) Duration varied from 10 days to 4 weeks.

Comparison: Topical antiseptic (Studies used: 1 to 5% Povidone iodine, 2% Acetic acid, 2% Boric acid and 1% Aluminium acetate). Duration varied from 10 days to 4 weeks

Outcome № of participants (studies)	Relative effect (95% CI)	**Anticipated absolute effects (95% CI)**			Quality	What happens
		Without Topical quinolone antibiotic	**With Topical quinolone antibiotic**	**Difference**		
Persistent discharge assessed with: otoscopy follow up: range 2 to 4 weeks № of participants: 702 (5 RCTs) [1,2,a]	**RR 0.56** (0.46 to 0.67)	57.0%	**31.9%** (26.2 to 38.2)	**25.1% fewer** (30.8 fewer to 18.8 fewer)	⨁⨁⨁◯ MODERATE [b,c]	In patients with CSOM treated with topical quinolone compared to topical antiseptic there are probably fewer patients with persistent discharge at 2-4 weeks follow-up. NNT ~ 4.
Healing of the tympanic membrane assessed with: otoscopy follow up: median 4 weeks № of participants: 399 (1 RCT) [2,d]	**RR 1.54** (0.91 to 2.61)	10.1%	**15.5%** (9.1 to 26.2)	5.4% more (NS) (0.9 fewer to 16.2 more)	⨁⨁◯◯ LOW [e,f]	In patients with CSOM treated with topical quinolone compared to topical antiseptic there is possibly no difference in healing of the tympanic membrane at 4 weeks. NNT Not Applicable

***The risk in the intervention group** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).

CI: Confidence interval; **RR:** Risk ratio; **NS:** Not significant; **NNT**: Number needed to treat; **NNH**: Number needed to harm

GRADE Working Group grades of evidence
High quality: We are very confident that the true effect lies close to that of the estimate of the effect
Moderate quality: We are moderately confident in the effect estimate: The true effect is likely to be close to the estimate of the effect, but there is a possibility that it is substantially different
Low quality: Our confidence in the effect estimate is limited: The true effect may be substantially different from the estimate of the effect
Very low quality: We have very little confidence in the effect estimate: The true effect is likely to be substantially different from the estimate of effect

Explanations

a. Studies taken from: (1) Cochrane review, Macfadyen 2005 (van Hasselt 1997, Fradis 1997, Jaya 2003, Macfadyen 2005) and (2) Loock 2012
b. Risk of Bias: Attrition bias (van Hasselt 1997) noted however only small number in meta-analysis and removal does not affect overall result of data. Not rated down.
c. Indirectness: various antiseptic solutions used
d. Studies taken from: Cochrane review, Macfadyen 2005 (Macfayden 2005)
e. Imprecision: Small studies / optimal information size not reached
f. Imprecision: Single study

References

1. Loock JW. A randomised controlled trial of active chronic otitis media comparing courses of eardrops versus one-off topical treatments suitable for primary, secondary and tertiary healthcare settings. Clinical otolaryngology : official journal of ENT-UK ; official journal of Netherlands Society for Oto-Rhino-Laryngology & Cervico-Facial Surgery. 2012;37(4):261-70. Epub 2012/07/19. doi: 10.1111/j.1749-4486.2012.02532.x. PubMed PMID: 22804826.
2. Macfadyen CA, Acuin JM, Gamble C. Topical antibiotics without steroids for chronically discharging ears with underlying eardrum perforations. The Cochrane database of systematic reviews. 2005(4):Cd004618. Epub 2005/10/20. doi: 10.1002/14651858.CD004618.pub2. PubMed PMID: 16235370.