Summary of findings:

36. Systemic antibiotic compared to topical antibiotic for chronic suppurative otitis media

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

Setting: Primary health care.

Intervention: Systemic antibiotic [oral amoxicillin-clavulanic acid (375mg) three times daily, for 7days; Ciprofloxacin (500mg) twice daily for 10 days; intramuscular Gentamicin sulfate (80mg) twice daily for 5-10 days].

Comparison: Topical quinolone antibiotic [Studies used: Ofloxacin eardrops 0.3% three times daily, for 7days; Ciprofloxacin eardrops (250 microgram/mL) twice daily for 5-10 days].

Outcome № of participants (studies)	Relative effect (95% CI)	Anticipated absolute effects (95% CI)			Quality	What happens
		Without Oral antibiotic	**With Oral antibiotic**	**Difference**		
Treatment failure - Systemic non-quinolone vs topical quinolone assessed with: persistent discharge on otoscopy follow up: range 1 to 2 weeks № of participants: 116 (2 RCTs) [1,a]	**RR 3.21** (1.88 to 5.49)	20.3%	**65.3%** (38.2 to 100.0)	**44.9% more** (17.9 more to 91.3 more)	⨁⨁⨁◯ MODERATE [b,c]	In patients with CSOM treated with systemic antibiotics compared to topical antibiotics there are probably more treatment failures at 1-2 weeks follow-up. NNH ~3
Treatment failure - Systemic quinolone vs topical quinolone assessed with: persistent discharge on otoscopy follow up: range 1 to 2 weeks № of participants: 175 (3 RCTs) [1,d]	**RR 3.18** (1.87 to 5.43)	15.0%	**47.7%** (28.1 to 81.4)	**32.7% more** (13.1 more to 66.5 more)	⨁⨁⨁◯ MODERATE [b,c]	In patients with CSOM treated with oral quinolone comapred to topical quinolone there are probably more treatment failures at 1-2 weeks follow-up. NNH ~4

***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: Cochrane Review, Macfadyen 2006 (Yuen 1994, Esposito 1992)

b. Risk of Bias: Performance bias (blinding not described and not likely - Esposito 1992).

c. Imprecision: Optimal information size not reached.

d. Studies taken from: Cochrane Review, Macfadyen 2006 (Esposito 1990, de Miguel 1999, Povedano 1995)

e. Study taken from: Browning 1983

References

1. Macfadyen CA, Acuin JM, Gamble C. Systemic antibiotics versus topical treatments for chronically discharging ears with underlying eardrum perforations. The Cochrane database of systematic reviews. 2006(1):Cd005608. Epub 2006/01/27. doi: 10.1002/14651858.Cd005608. PubMed PMID: 16437533.