

GRADE tables for review question: What intraoperative or postoperative interventions are effective at preventing otorrhoea (ear discharge) after surgery for OME-related hearing loss in children under 12 years?

Table 5: Evidence profile for comparison: intraoperative ciprofloxacin drops versus no topical ciprofloxacin

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Intraoperative ciprofloxacin drops	No topical ciprofloxacin	Relative (95% CI)	Absolute		
Otorrhoea (follow-up 6 weeks)												
1 (Wang 2022)	randomised trials	no serious risk of bias	no serious inconsistency	serious ¹	no serious imprecision	none	8/174 (4.6%)	24/178 (13.5%)	RR 0.34 (0.16 to 0.74)	89 fewer per 1000 (from 35 fewer to 113 fewer)	MODERATE	CRITICAL
Tube blockage (follow-up 6 weeks)												
1 (Wang 2022)	randomised trials	no serious risk of bias	no serious inconsistency	serious ¹	serious ²	none	11/174 (6.3%)	21/178 (11.8%)	RR 0.54 (0.27 to 1.08)	54 fewer per 1000 (from 86 fewer to 9 more)	LOW	IMPORTANT

CI: confidence interval; RR: risk ratio

¹ Population is indirect because 34% had recurrent acute otitis media.

² 95% CI crosses 1 MID

Table 6: Evidence profile for comparison: intraoperative and postoperative ciprofloxacin drops versus no topical ciprofloxacin

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Intraoperative and postoperative ciprofloxacin drops	No topical ciprofloxacin	Relative (95% CI)	Absolute		

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Intraoperative and postoperative ciprofloxacin drops	No topical ciprofloxacin	Relative (95% CI)	Absolute		
Otorrhoea (follow-up 6 weeks)												
1 (Wang 2022)	randomised trials	no serious risk of bias	no serious inconsistency	serious ¹	serious ²	none	14/160 (8.8%)	24/178 (13.5%)	RR 0.65 (0.35 to 1.21)	47 fewer per 1000 (from 88 fewer to 28 more)	LOW	CRITICAL
Tube blockage (follow-up 6 weeks)												
1 (Wang 2022)	randomised trials	no serious risk of bias	no serious inconsistency	serious ¹	serious ²	none	8/160 (5%)	21/178 (11.8%)	RR 0.42 (0.19 to 0.93)	68 fewer per 1000 (from 8 fewer to 96 fewer)	LOW	IMPORTANT

CI: confidence interval; RR: risk ratio

¹ Population is indirect due to 34% of population with recurrent acute otitis media, and intervention is indirect due to the combination of intraoperative and postoperative ear drops.

² 95% CI crosses 1 MID

Table 7: Evidence profile for comparison: intraoperative intratympanic ciprofloxacin injection versus placebo/sham

Preventing otorrhoea after surgery for hearing loss associated with OME in children

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Intraoperative intratympanic ciprofloxacin injection	Placebo/Sham	Relative (95% CI)	Absolute		
Otorrhoea (follow-up 15 to 29 days)												
2*	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	no serious imprecision	none	41/392 (10.5%)	54/216 (25%)	RR 0.42 (0.29 to 0.62)	145 fewer per 1000 (from 95 fewer to 178 fewer)	MODERATE	CRITICAL
Otorrhoea - Intraoperative intratympanic ciprofloxacin injection 4 mg versus Sham (follow-up 15 days)												
1 (Mair 2016)	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	very serious ⁴	none	2/21 (9.5%)	5/20 (25%)	RR 0.38 (0.08 to 1.74)	155 fewer per 1000 (from 230 fewer to 185 more)	VERY LOW	CRITICAL
Otorrhoea - Intraoperative intratympanic ciprofloxacin injection 12 mg versus Placebo (follow-up 15 days)												
1 (Mair 2016)	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	serious ⁶	none	2/19 (10.5%)	8/22 (36.4%)	RR 0.29 (0.07 to 1.2)	258 fewer per 1000 (from 338 fewer to 73 more)	LOW	CRITICAL
Otorrhoea - Intraoperative intratympanic ciprofloxacin injection 6 mg versus Sham (follow-up 29 days)												
1 (Park 2016)	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	no serious imprecision	none	37/352 (10.5%)	41/174 (23.6%)	RR 0.45 (0.3 to 0.67)	130 fewer per 1000 (from 78 fewer to 165 fewer)	MODERATE	CRITICAL
Adverse effects of intervention (treatment-emergent events including otorrhoea, pyrexia, upper respiratory tract infection, ear infection and diarrhoea (Mair 2016) or pyrexia, pain, cough, nasopharyngitis, upper respiratory tract infection, irritability, vomiting, nasal congestion and rhinorrhoea (Park 2016)) (follow-up 29 days)												
2*	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	serious ⁶	none	211/397 (53.1%)	125/215 (58.1%)	RR 0.92 (0.8 to 1.07)	47 fewer per 1000 (from 116 fewer to 41 more)	LOW	CRITICAL
Adverse effects of intervention (treatment-emergent events including otorrhoea, pyrexia, upper respiratory tract infection, ear infection and diarrhoea) - Intraoperative intratympanic ciprofloxacin injection 4 mg versus Sham (follow-up 29 days)												

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Intraoperative intratympanic ciprofloxacin injection	Placebo/Sham	Relative (95% CI)	Absolute		
1 (Mair 2016)	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	serious ⁶	none	13/21 (61.9%)	18/20 (90%)	RR 0.69 (0.48 to 0.99)	279 fewer per 1000 (from 9 fewer to 468 fewer)	LOW	CRITICAL
Adverse effects of intervention (treatment-emergent events including otorrhoea, pyrexia, upper respiratory tract infection, ear infection and diarrhoea) - Intraoperative intratympanic ciprofloxacin injection 12 mg versus Placebo (follow-up 29 days)												
1 (Mair 2016)	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	very serious ⁴	none	9/19 (47.4%)	12/22 (54.5%)	RR 0.87 (0.47 to 1.6)	71 fewer per 1000 (from 289 fewer to 327 more)	VERY LOW	CRITICAL
Adverse effects of intervention (treatment-emergent events including pyrexia, pain, cough, nasopharyngitis, upper respiratory tract infection, irritability, vomiting, nasal congestion and rhinorrhoea) - Intraoperative intratympanic ciprofloxacin injection 6 mg versus Sham (follow-up 29 days)												
1 (Park 2016)	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	no serious imprecision	none	189/357 (52.9%)	95/173 (54.9%)	RR 0.96 (0.82 to 1.14)	22 fewer per 1000 (from 99 fewer to 77 more)	MODERATE	CRITICAL
Tube blockage (follow-up 29 days)												
1 (Park 2016)	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	very serious ⁴	none	18/357 (5%)	7/173 (4%)	RR 1.25 (0.53 to 2.93)	10 more per 1000 (from 19 fewer to 78 more)	VERY LOW	IMPORTANT
Tube extrusion (follow-up 29 days)												
1 (Park 2016)	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	very serious ⁴	none	3/357 (0.84%)	1/173 (0.58%)	POR 1.42 (0.17 to 11.54)	2 more per 1000 (from 5 fewer to 57 more)	VERY LOW	IMPORTANT

CI: confidence interval; POR: Peto odds ratio; RR: risk ratio

*See corresponding forest plot (Figure 2)

¹ Serious risk of bias in the evidence contributing to the outcomes as per RoB 2

⁴ 95% CI crosses 2 MIDs

⁶ 95% CI crosses 1 MID

Table 8: Evidence profile for comparison: water precautions versus no precautions

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Water precautions	No precautions	Relative (95% CI)	Absolute		
Otorrhoea (follow-up 6 months)												
1 (Subtil 2019)	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	41/130 (31.5%)	25/114 (21.9%)	RR 1.44 (0.94 to 2.21)	96 more per 1000 (from 13 fewer to 265 more)	VERY LOW	CRITICAL
Quality of life (improvement in quality of life) (follow-up 2 months)												
1 (Subtil 2019)	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	no serious imprecision	none	113/130 (86.9%)	99/114 (86.8%)	RR 1 (0.91 to 1.1)	0 fewer per 1000 (from 78 fewer to 87 more)	LOW	IMPORTANT

CI: confidence interval; RR: risk ratio

¹ Very serious risk of bias in the evidence contributing to the outcomes as per RoB 2

² 95% CI crosses 1 MID