Summary of findings:

22. Topical analgesia as an adjunct to simple oral analgesia compared to placebo ear drops for immediate pain relief in acute otitis media

Patient or population: Children aged 3 to 19 years with acute otitis media and pain.

Setting: Emergency departments

Intervention: Topical analgesic ear drops as an adjunct to simple oral analgesia (Studies used: 2% aqueous lignocaine or antipyrine benzocaine glycerine. Both studies offered paracetamol 15mg/kg/dose single dose). Single dose of ear drops given on presentation to emergency department.

Comparison: Placebo ear drops (Studies used: Normal saline or olive oil. Both studies offered paracetamol 15mg/kg/dose single dose)

Outcome № of participants (studies)	Relative effect (95% CI)	**Anticipated absolute effects (95% CI)**			Quality	What happens
		Without Topical analgesia as an adjunct to simple oral anagesia	**With Topical analgesia as an adjunct to simple oral anagesia**	**Difference**		
50% reduction in ear pain assessed: two visual analogue scales follow up: median 10 minutes № of participants: 117 (2 RCTs) [1, a]	**RR 2.13** (1.19 to 3.80)	20.3%	**43.3%** (24.2 to 77.3)	**23.0% more** (3.9 more to 56.9 more)	⨁⨁◯◯ LOW [b,c]	Children with AOMwoP who have local anaesthetic ear drops administered by a health professional compared to placebo possibly have a reduction in pain score by 50% at 10 minutes. NNT ~5.
50% reduction in ear pain assessed: two visual analogue scales follow up: median 20 minutes № of participants: 117 (2 RCTs) [1,a]	**RR 1.24** (0.88 to 1.74)	47.5%	**58.8%** (41.8 to 82.6)	**11.4% more** (5.7 fewer to 35.1 more)	⨁⨁◯◯ LOW [b,c]	Children with AOMwoP who have local anaesthetic ear drops administered by a health professional compared to placebo possibly have no reduction in pain score by 50% at 20 minutes. NNT Not Applicable
50% reduction in ear pain assessed: two visual analogue scales follow up: median 30 minutes № of participants: 117 (2 RCTs) [1,a]	**RR 1.43** (1.12 to 1.81)	59.3%	**84.8%** (66.4 to 100.0)	**25.5% more** (7.1 more to 48.1 more)	⨁⨁◯◯ LOW [b,c]	Children with AOMwoP who have local anaesthetic ear drops administered by a health professional compared to placebo possibly have a reduction in pain score by 50% at 30 minutes. NNT ~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; **AOMwoP:** Acute otitis media without perforation

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		Without Topical analgesia as an adjunct to simple oral anagesia	**With Topical analgesia as an adjunct to simple oral anagesia**	**Difference**		

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, Foxlee 2008 (Bolt 2008, Hoberman 1997).
b. Indirectness: Studies of children 3-18 years of age. Peak incidence AOM is 6-15 months of age.
c. Imprecision: Small studies

References

1. Foxlee R, Johansson A, Wejfalk J, Dawkins J, Dooley L, Del Mar C. Topical analgesia for acute otitis media. The Cochrane database of systematic reviews. 2006(3):Cd005657. Epub 2006/07/21. doi: 10.1002/14651858.CD005657.pub2. PubMed PMID: 16856108.