

Summary of findings:





25. Twice daily compared to three daily doses of Amoxicillin (+/- clavulanate) for acute otitis media

Patient or population: Children aged 2 months to 12 years with acute otitis media

Setting: Primary health care.

Intervention: Amoxicillin (+/- clavulanate) twice daily (Studies used: amoxicillin 40-60mg/kg/day, amoxicillin/clavulanate 40-70/10 mg/kg/day). Duration was 7 to 10 days.

Comparison: Amoxicillin (+/- clavulanate) three times daily (Studies used: amoxicillin 40-60mg/kg/day, amoxicillin/clavulanate 45-60 / 6.4-15 mg/kg/ day). Duration was 7 to 10 days.

Outcome № of participants (studies)	Relative effect (95% CI)	Anticipated absolute effects (95% CI)			Quality	What happens
		With Three daily doses	With Twice daily	Difference		
Clinical cure rate at the end of therapy assessed by: clinical, otoscopy +/- tympanometry follow up: range 7 to 10 days № of participants: 1601 (5 RCTs) ^{1,a}	RR 1.03 (0.99 to 1.07)	86.4%	89.0% (85.6 to 92.5)	2.6% more (NS) (0.9 fewer to 6.1 more)	 MODERATE ^b	In children with AOM treated with BD compared to TDS Amoxicillin there is probably no difference in cure rates at 7-10 days (end of therapy). NNT Not Applicable
Adverse reactions to medication (gastrointestinal and cutaneous) assessed by: parental report follow up: range 28 to 42 days № of participants: 878 (2 RCTs) ^{1,c}	RR 0.92 (0.52 to 1.63)	29.9%	27.5% (15.6 to 48.8)	2.4% fewer (14.4 fewer to 18.8 more)	 LOW ^{b,d,e}	In children with AOM treated with BD compared to TDS Amoxicillin there is possibly no fewer adverse events during 42 days follow-up. NNT Not Applicable
AOM complications: Recurrent AOM after completion of therapy assessed by: clinical, otoscopy +/- tympanometry follow up: range 42 to 90 days № of participants: 1029 (3 RCTs) ^{1,f}	RR 1.21 (0.52 to 2.81)	9.2%	11.1% (4.8 to 25.7)	1.9% more (4.4 fewer to 16.6 more)	 LOW ^{b,g,h}	In children with AOM treated with BD compared to TDS Amoxicillin there is possibly no more AOM recurrences during ~3months follow-up. NNT Not Applicable
Compliance rate assessed by: parental report follow up: range 7 to 14 days № of participants: 1520 (4 RCTs) ^{1,i}	RR 1.04 (0.98 to 1.10)	81.8%	85.1% (80.2 to 90.0)	3.3% more (1.6 fewer to 8.2 more)	 LOW ^{b,d}	In children with AOM treated with BD compared to TDS Amoxicillin there is possibly no difference in compliance during therapy. NNT Not Applicable

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*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

- Studies taken from: Cochrane Review, Thanaviratnanich 2013 (Principi1986, Murph 1993, Behre 1997, Hoberman 1997, Damrikamert 2000)
- Risk of Bias: Attrition bias (Behre & Damrikamert), selective reporting (Murph 1993)
- Studies taken from: Cochrane Review, Thanaviratnanich 2013 (Behre 1997, Damrikamert 2000)
- Imprecision: High heterogeneity
- Imprecision: Optimal information size not met, noted and not rated down.
- Studies taken from: Cochrane Review, Thanaviratnanich 2013 (Principi1986, Hoberman 1997, Damrikamert 2000)
- Inconsistency: Borderline high heterogeneity noted but not rated down.
- Imprecision: Low event rate, optimal information size not reached
- Studies taken from: Cochrane Review, Thanaviratnanich 2013 (Murph 1993, Behre 1997, Hoberman 1997, Damrikamert 2000)

References

1. Thanaviratnanich S, Laopaiboon M, Vatanasapt P. Once or twice daily versus three times daily amoxicillin with or without clavulanate for the treatment of acute otitis media. The Cochrane database of systematic reviews. 2013(12):Cd004975. Epub 2013/12/18. doi: 10.1002/14651858.CD004975.pub3. PubMed PMID: 24338106.