

Table 33: Clinical evidence profile: Comparison 4. Combination IV antibiotics *versus* combination IV antibiotics for pulmonary exacerbations with *P aeruginosa*

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Combination IV AB	combination IV AB	Relative (95% CI)	Absolute		
Eradication of pathogen (follow-up 2 weeks) [aztreonam + amikacin <i>versus</i> ceftazidime + amikacin]												
1(Schaad 1989)	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	very serious ²	none	17/28 ^a (60.7%)	16/28 ^a (57.1%)	RR 1.06 (0.69)	34 more per 1000 (from	VERY LOW	CRITICAL

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Combination IV AB	combination IV AB	Relative (95% CI)	Absolute		
									to 1.65)	177 fewer to 371 more)		
FEV₁ % predicted (absolute change) (follow-up 2 weeks; Better indicated by lower values) [aztreonam + versus ceftazidime + amikacin]												
1 Schaad (1989)	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	serious ³	none	24 ^a	25 ^a	-	MD 4 higher (0.25 lower to 8.25 higher)	LOW	CRITICAL
FEV₁ % predicted (absolute change) (follow-up 2 - 4 weeks^b; Better indicated by higher values) [meropenem + tobramycin versus ceftazidime + tobramycin]												
1 (Blumer 2005)	randomised trials	serious ⁴	no serious inconsistency	no serious indirectness	serious ³	none	47	50	-	MD 2.7 higher (0.76 lower to 6.16 higher)	LOW	CRITICAL
FEV₁ % predicted (relative % change) (follow-up 2-4 weeks^b; Better indicated by higher values) [meropenem + tobramycin versus ceftazidime + tobramycin]												
1 (Blumer 2005)	randomised trials	serious ⁴	no serious inconsistency	no serious indirectness	very serious ⁵	none	47	50	-	MD 9.4 higher (8.44 lower to 27.24 higher)	VERY LOW	CRITICAL
Adverse effects - Rash (follow-up 2 weeks) [aztreonam + amikacin versus ceftazidime + amikacin]												

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Combination IV AB	combination IV AB	Relative (95% CI)	Absolute		
1 (Schaad 1989)	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	very serious ⁶	none	0/28a (0%)	2/28a (7.1%)	RR 0.2 (0.01 to 3.99)	57 fewer per 1000 (from 71 fewer to 214 more)	VERY LOW	IMPORTANT
Adverse effects - Liver transaminases - AST & ALT (follow-up 2 weeks) [aztreonam + amikacin versus ceftazidime + amikacin]												
1 (Schaad 1989)	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	very serious ⁶	none	4/28 (14.3%)	2/28 (7.1%)	RR 2 (0.4 to 10.05)	71 more per 1000 (from 43 fewer to 646 more)	VERY LOW	IMPORTANT
Adverse effects - Thrombocytopenia (follow-up 2 weeks) [aztreonam + amikacin versus ceftazidime + amikacin]												
1 (Schaad 1989)	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	very serious ⁶	none	3/28 (10.7%)	0/28 (0%)	RR 7 (0.38 to 129.55)	-	VERY LOW	IMPORTANT

Abbreviations: AST: aminotransferase, ALT: alanine aminotransferase; CI: confidence interval; FEV₁: forced expiratory volume in 1 second; IV: intravenous; MD: mean difference; RR: risk ratio

a total of 56 treatment courses were randomised, N=42 participants

b 2 to 4 weeks after discontinuation of 2 week course.

1 The quality of the evidence was downgraded by 1 due to attrition bias (clinical outcomes available for only around 50% of participants).

2 The quality of the evidence was downgraded by 2, as the 95% CI crossed the null effect and the CI was very wide

3 The quality of the evidence was downgraded by 1 as 95% CI crossed 1 clinical MID.

4 The quality of the evidence was downgraded by 1 due to attrition bias (some data missing).

5 The quality of the evidence was downgraded by 2 as 95% CI crossed 2 clinical MIDs.

6 The quality of the evidence was downgraded by 2 as 95% CI crossed 2 default MIDs.