Table 32:	Clinical evidence profile: Comparison 3. Single IV antibiotic versus combination IV antibiotic for pulmonary
exacerbation	s with P aeruginosa

Quality No of studi es Eradic	y assessmer Design ation: numb	nt Risk of bias er of peo	Inconsisten cy pple in whom p	Indirectne ss seudomonas	Imprecisi on s isolates we	Other consideratio ns ere eradicated a	No of patie Single IV antibiotic	nts Comb inatio n IV antibi otic rse (follo	Effect Relati ve (95% CI) ow-up 10	Absol ute days) [Pi	Quality peracillin <i>ver</i>	Importance sus
pipera	cillin + tobra	mycin]	no ocriouo		20	2020	5/10	10/10	חח	266		CDITICAL
Carty 1988)	d trials	seriou s ¹	inconsistenc y	indirectnes s	no serious imprecisio n ²	none	(26.3%)	(63.2 %)	0.42 (0.18 to 0.95)	fewer per 1000 (from 32 fewer to 518 fewer)	LOW	CRITICAL
FEV ₁ (relative char	nge) (follo	ow-up 10 - 14 c	lays; measur	ed with: %;	Better indicate	d by higher v	values) [o	ceftazidiı	ne versus	s tobramycin	+ ticarcillin]
1 (Gold 1985)	randomise d trials	seriou s ³	no serious inconsistenc y	no serious indirectnes s	serious imprecisio n ⁴	none	17	13	-	MD 19.6 lower (38.26 to 0.94 lower)	LOW	CRITICAL
FEV ₁ (a	absolute cha	ange) (fol	llow-up 12 day	s; measured	with: ml; B	etter indicated	by higher va	lues) [Co	olistin ve	rsus colis	stin & "other"	
1 (Con way	randomise d trials	very seriou s ⁵	no serious inconsistenc y	no serious indirectnes s	no serious	none	36	35	-	MD 160 lower	LOW	CRITICAL

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Quality No of studi es	/ assessmer Design	nt Risk of bias	Inconsisten cy	Indirectne ss	Imprecisi on	Other consideratio ns	No of patien Single IV antibiotic	nts Comb inatio n IV antibi otic	Effect Relati ve (95% Cl)	Absol ute	Quality	Importance
)					n					2 to 10.28 lower)		
FEV ₁ %	6 predicted ((absolute	change) (follo	w-up: 14 day	s; Better ind	dicated by high	er values) [c	eftazidin	ne versus	s tobramy	cin + piperac	illin]
1 (De Boec k 1989)	randomise d trials	seriou S ³	no serious inconsistenc y	no serious indirectnes s	very serious ⁶	none	11	10	-	MD 1 higher (8.85 lower to 10.85 higher)	VERY LOW	CRITICAL
Time t	o readmissio	on (follow	/-up: 24 to 26 r	nonths; Bett	er indicated	by lower value	s) [ceftazidin	ne versu	s tobram	ycin + pi	peracillin]	
1 (De Boec k 1989)	randomise d trials	seriou s ³	no serious inconsistenc y	no serious indirectnes s	very serious ⁷	none	9	10	-	MD 1 lower (5.52 lower to 3.52 higher)	VERY LOW	IMPORTAN T
Numbe	er of admiss	ions, req	uiring IV antibi	otics or deat	h (follow-up	3 months) [cef	ftazidime ver	s <i>us</i> tobr	amycin +	ticarcilli	n]	
1 (Wes ley 1988)	randomise d trials	seriou s ⁸	no serious inconsistenc y	no serious indirectnes s	very serious ⁷	none	7/12 (58.3%)	5/10 (50%)	RR 1.17 (0.53 to 2.55)	85 more per 1000 (from 235 fewer to 775 more)	VERY LOW	IMPORTAN T

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Quality	/ assessmer		No of patients		Effect							
No of studi es	Design	Risk of bias	Inconsisten cy	Indirectne ss	Imprecisi on	Other consideratio ns	Single IV antibiotic	Comb inatio n IV antibi otic	Relati ve (95% Cl)	Absol ute	Quality	Importance
Mortal	ity (follow-u	p 4 montl	hs) [ceftazidim	e <i>versus</i> tob	ramycin & ti	carcillin]						
1 (De Boec k 1989)	randomise d trials	seriou S ⁹	no serious inconsistenc y	no serious indirectnes s	serious ¹⁰	none	1/10 (10%)	1/11 (9.1%)	RR 1.1 (0.08 to 15.36)	9 more per 1000 (from 84 fewer to 1000 more)	LOW	IMPORTAN T
Mortal	ity (follow-u	p 12 weel	ks) [Colistin <i>ve</i>	ersus colistin	+ "other"]							
1 (Con way 1997)	randomise d trials	very seriou s ⁵	no serious inconsistenc y	no serious indirectnes s	serious ¹⁰	none	0/36 (0%)	1/35 (2.9%)	RR 0.32 (0.01 to 7.7)	19 fewer per 1000 (from 28 fewer to 191 more)	VERY LOW	IMPORTAN T
Advers	se effects: liv	ver trans	aminase enzyr	ne elevation	(follow-up 1	0-14 days) [cef	tazidime vers	sus tobra	amycin +	ticarcillin	ן]	
2 (Gold 1987 and Wesl ey 1988)	randomise d trials	seriou s ¹¹	no serious inconsistenc y	no serious indirectnes s	very serious ⁷	none	4/29a (13.8%)	2/23 ^{a,b} (8.7%)	RR 1.53 (0.33 to 7.11)	46 more per 1000 (from 58 fewer to 531 more)	VERY LOW	IMPORTAN T

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Quality No of studi es	y assessmer Design	nt Risk of bias	Inconsisten cy	Indirectne ss	Imprecisi on	Other consideratio ns	No of patien Single IV antibiotic	nts Comb inatio n IV antibi	Effect Relati ve (95% Cl)	Absol ute		
								otic			Quality	Importance
Advers 1 (Con way 1997)	se effects: n randomise d trials	eurologio very seriou s⁵	cal adverse effo no serious inconsistenc y	ects (follow-u no serious indirectnes s	no serious imprecisio n	Colistin versus	s combinatio 33/35 (94.3%)	n anti-ps 36/36 (100 %)	RR 0.94 (0.86 to 1.04)	60 fewer per 1000 (from 140 fewer to 40 more)	LOW	IMPORTAN T
Advers	se effects: ra	ash (follo	w-up 10 days)	[piperacillin	versus pipe	racillin + tobrar	nycin]					
1 (McC arty 1988)	randomise d trials	very seriou s ¹	no serious inconsistenc y	no serious indirectnes s	very serious ⁷	none	0/8 (0%)	1/9 (11.1 %)	RR 0.37 (0.02 to 7.99)	70 fewer per 1000 (from 109 fewer to 777 more)	VERY LOW	IMPORTAN T
Advers	se effects: fe	ever (follo	w-up 10 days)	[piperacillin	versus pipe	eracillin + tobra	mycin]					
1 (McC arty 1988)	randomise d trials	very seriou s ¹	no serious inconsistenc y	no serious indirectnes s	very serious ⁷	none	1/8 (12.5%)	1/9 (11.1 %)	RR 1.12 (0.08 to 15.19)	13 more per 1000 (from 102 fewer to	VERY LOW	IMPORTAN T

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Quality	y assessmer		No of patients		Effect							
No of studi es	Design	Risk of bias	Inconsisten cy	Indirectne ss	Imprecisi on	Other consideratio ns	Single IV antibiotic	Comb inatio n IV antibi otic	Relati ve (95% CI)	Absol ute	Quality	Importance
										1000 more)		
Adver	se effects: p	roteinuria	a (follow-up 10	- 14 days) [c	eftazidime v	versus tobramy	cin+ticarcilli	n]		,		
1 (Gold 1985)	randomise d trials	seriou S ³	no serious inconsistenc y	no serious indirectnes s	very serious ⁷	none	1/17ª (5.9%)	1/17ª (5.9%)	RR 1 (0.07 to 14.72)	0 fewer per 1000 (from 55 fewer to 807 more)	VERY LOW	IMPORTAN T
Advers anti-ps	se effects: re seudo]	enal toxic	ity - Change ir	blood urea	(mmol/l) (fol	low-up 12 days	; Better indic	cated by	lower va	lues) [col	listin <i>versus</i> o	combination
1 (Con way 1997)	randomise d trials	very seriou s ⁵	no serious inconsistenc y	no serious indirectnes s	serious ¹²	none	36	35	-	MD 0.26 lower (0.93 lower to 0.41 higher)	VERY LOW	IMPORTAN T
Advers combi	se effects: re nation anti-p	enal toxic []] []] []] []] []] []] []] []] []] []	ity - Change ir	n serum creat	tinine (mmo	l/l) (follow-up 1	2 days; Bette	er indicat	ed by lov	wer value	es) [colistin ve	ersus
1 (Con way 1997)	randomise d trials	very seriou s ⁵	no serious inconsistenc y	no serious indirectnes s	very serious ⁷	none	36	35	-	MD 8.85 higher (0.66 lower to	VERY LOW	IMPORTAN T

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Quality	Quality assessment							No of patients				
No of studi es	Design	Risk of bias	Inconsisten cy	Indirectne ss	Imprecisi on	Other consideratio ns	Single IV antibiotic	Comb inatio n IV antibi otic	Relati ve (95% Cl)	Absol ute	Quality	Importance
										18.36 higher)		

Abbreviations: CI: confidence interval; FEV₁: forced expiratory volume in 1 second; IV: intravenous; MD: mean difference; mmol/ I: millimoles per litre; RR: risk ratio a Gold 1985: total of 34 treatment observations in N=30

b Wesley 1988: total of 23 observations in N=13

1 The quality of the evidence was downgraded by 2 due to no blinding and 3 participants were included twice in analysis

2 Minimal important difference for this outcome (MID) = any difference is clinically significant

3 The quality of the evidence was downgraded by 1 due to no blinding.

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

5 The quality of the evidence was downgraded by 2 due to single blinding and 18 participants were enrolled twice.

6 The quality of the evidence was downgraded by 2 due as 95%Cl crossed 2 clinical MIDs.

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

8 The quality of the evidence was downgraded by 1 as 13 participants received 23 courses of treatment.

9 The quality of the evidence was downgraded by 1 due to multiple enrolment of participants (40 participants contribute to 46 treatment episodes).

10 The quality of the evidence was downgraded by 1, as the 95% CI crossed the null effect (mortality could either decrease or increase)

11 The quality of the evidence was downgraded by 1 due lack of blinding in 1 trial, and because some participants were enrolled twice

12 The quality of the evidence was downgraded by 1 as 95% CI crossed 1 default MID