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P2417 Ceftolozane-tazobactam and ceftazidime-avibactam susceptibilities of Pseudomonas aeruginosa isolates from cystic fibrosis and non cystic fibrosis patients.

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Background: Cystic fibrosis (CF) patients are commonly colonised with *P. aeruginosa* (PAER) and receive frequent courses of antimicrobial treatment during periods of exacerbations. Ceftolozane-tazobactam (CTL-TAZ) and ceftazidime-avibactam (CAZ-AVI) are newer agents which could be used as potential therapy options for these patients or as carbapenem (CARB) sparing agents on non CF patients. Susceptibilities of PAER from these patient cohorts were investigated.

Materials/methods: 335 non CF and 77 CF PAER isolates were tested. Minimum Inhibitory Concentrations (MIC) to CTL-TAZ and CAZ-AVI were determined by gradient strip using manufacturer's instructions and interpreted using EUCAST breakpoints. Comparator agent MICs were determined by microbroth dilution.

Results: Percentage susceptibilities of non CF isolates were ceftazidime (78.1%), imipenem (75.3%), meropenem (79.5%), colistin (94.5%), amikacin (73.9%), aztreonam (59.7%), ciprofloxacin (66.7%), gentamicin (76.1%), levofloxacin (64.8%), tazocin (75%), timentin (39.4%), tobramycin (84.9%), CTL-TAZ (91%), CAZ-AVI (84.5%).

170/335 (50.7%) were IMI or MER (CARB) R; of these 154 (90.6%) & 122 (71.8%) were S to CTL-TAZ & CAZ-AVI. 5 isolates contained VIM or IMP metallo-β-lactamases. CF isolates CTL-TAZ and CAZ-AVI susceptibilities are shown in Table 1. CARB R in all isolates was due to ampC and porin loss.

CTL-TAZ	**Range**	**MIC_{50}**	**MIC_{90}**	**%S**
All (77)	0.38->256	1	>256	85.7%
CAZ R (16)	0.5-1	1	1	100%
CARB R (21)	0.38->256	1.5	>256	90.5%
CAZ-AVI				
All (77)	0.5->256	2	>256	85.7%
CAZ R (16)	1.5-16	1.5	2	93.8%
CARB R (21)	0.5->256	2	>256	57.1%

Table 1

4 CF and 1 non CF PAER were COL R (MCR-1 negative), of these 3 were S to CTL-TAZ and 4 S to CAZ-AVI.

Conclusions: CTL-TAZ and CAZ-AVI could be useful as carbapenem sparing agents for treatment of infections caused by *P. aeruginosa* in non CF patients. These agents show good activity against PAER in CF patients including against both CAZ and CARB R PAER isolates.