

REPORT OF THE ANTIMICROBIAL SUSCEPTIBILITY PROFILES OF ISOLATES FROM THE NATIONAL EPIDEMIOLOGIC SURVEY OF *ENTEROBACTER AEROGENES* IN BELGIAN HOSPITALS IN 2000-2001

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METHODS

Antimicrobial susceptibility (MICs of 10 antimicrobials determined by agar dilution) and ESBL production (detected using the double-disk synergy test and Oxoid combination disks) were determined on strains collected from hospitalized patients (5 consecutive non-duplicate MREA strains for each center) from May 2000 to May 2001.

RESULTS

65 centers sent 313 strains isolated from patients (mean age 72 years) hospitalized mostly in medical (35%), long-time care (20%), intensive care (18%) and surgical (15%) units. Strains originated mainly from the urinary (44%) and respiratory (32%) tracts, from wounds swabs (13%) and blood cultures (5%). More than 85% of the strains were resistant to ceftazidime and ciprofloxacin, less than 15% to aminoglycosides, less than 8% to cefepime and imipenem (Table 1). No meropenem resistant strains were recovered. ESBL production was detected by the two methods in 65% of the strains (all resistant to both ceftazidime and ciprofloxacin cf Table 2).

Table 1. Antimicrobial susceptibility of *E. aerogenes* isolates (n = 313).

Antimicrobials	MIC 50 (µg/ml)	MIC 90 (µg/ml)	% susceptible strains
Temocillin	16	32	84
Cefotaxime	16	32	40
Ceftazidime	>256	>256	14
Cefepime	1	8	93
Imipenem	0.25	1	98
Meropenem	<0.06	0.12	100
Amikacin	8	32	85
Gentamicin	1	4	96
Isepamicin	2	4	100
Ciprofloxacin	32	64	13

Table 2. Antimicrobial susceptibility of *E. aerogenes* isolates according to the production of ESBLs

Antimicrobials	% susceptible strains	
	ESBL – <i>n</i> = 109 (35%)	ESBL + <i>n</i> = 204 (65%)
Temocillin	92	80
Cefotaxime	48	36
Ceftazidime	38	0
Cefepime	100	90
Imipenem	99	97
Meropenem	100	99
Amikacin	90	83
Gentamicin	93	96
Isepamicin	100	99
Ciprofloxacin	38	<1

CONCLUSION

According to these results, it is suggested that Multi Resistant *E. aerogenes* (MREA) strains should be defined by combined resistance to one or more of the third generation cephalosporins (ceftazidime, ceftriaxone, cefotaxime, aztreonam) and one or more fluoroquinolone (norfloxacin, ofloxacin, ciprofloxacin,...)