P0840

Paper Poster Session IV

Healthcare-associated infection epidemiology and control

National differences in the presentation and management of patients with nosocomial pneumonia due to *Pseudomonas aeruginosa*

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Objectives: To evaluate regional differences in *Pseudomonas aeruginosa* nosocomial pneumonia (NP) among hospitals in France, Germany, Italy, Spain, and the United States.

Methods: This retrospective study collected data on 662 hospitalized patients with a clinical diagnosis of NP [hospital-associated pneumonia (hospital-associated pneumonia, ventilator-associated pneumonia, and health care-associated pneumonia] due to *P. aeruginosa*.

Results: Age at admission ranged from 49 years in Germany to 64 years in Italy. The majority were admitted from community/outpatient treatment in Spain (81%), Italy (73%), US (58%) and Germany (37%). Prior exposure to antimicrobials was common in Germany, France, Spain, and the US. VAP accounted for majority of the cases in France, Italy, and Spain. A high proportion of patients were admitted to the intensive care unit across all countries. Rates of mechanical ventilation were high in France, Italy, and Germany. Resistance rates of the *P. aeruginosa* pulmonary infection were high overall, with frequencies of resistant or intermediate to one or two antibacterial classes ranging from 24% in Spain to 50% in Italy; and rates of multiple drug resistance ranged from 22% in Italy to 43% in Germany and Spain. Length of stay was high and ranged from 22 days Germany to 44 days in France; in-hospital mortality was high and ranged from 24% in the US to 48% in Spain.

Conclusion: NP due to *P. aeruginosa* imposes a significant clinical and economic burden across countries. The observed differences in resource consumption probably reflect strategies used by different health care systems. Policies, guidelines, and treatment algorithms for *P. aeruginosa* NP must be tailored to reflect those regional differences.

Table 1. By-Country Characteristics of Patients with Nosocomial Pneumonia Due to *Pseudomonas aeruginosa*

Variable		France (N=141)	Germany (N=120)	Italy (N=108)	Spain (N=115)	United States (N=178)
Number of sites	n	2	2	2	3	2
Age (years)*	Mean (SD)	59 (16)	49 (17)	64 (15)	62 (15)	60 (16)
Antimicrobials in prior 30 days	n/N (%)	69/141 (49%)	54/92 (59%)	8/27 (30%)	29/63 (46%)	65/141 (46%)
Ventilator-associated pneumonia*	n (%)	100 (71%)	35 (29%)	90 (83%)	58 (50%)	43 (24%)
Admitted to ICU*	n (%)	105 (74%)	108 (90%)	104 (96%)	96 (83%)	77 (43%)
Resistant to 1-2 antibacterial classes*	n (%)	46 (33%)	42 (35%)	54 (50%)	26 (24%)	50 (28%)
Multidrug resistant*	n (%)	50 (35%)	51 (43%)	24 (22%)	47 (43%)	42 (24%)
Length of stay (days)*	Median (IQR)	44 (47)	22 (29)	43 (44)	36 (47)	23 (23)
Died during hospitalization*	n (%)	53 (38%)	50 (42%)	50 (46%)	55 (48%)	43 (24%)

* $P < .05$