

CLINICAL AND MICROBIOLOGICAL CHARACTERISTICS OF CASES OF ATYPICAL INVASIVE PNEUMOCOCCAL DISEASE

Adrián Sousa, M Teresa Pérez-Rodríguez, Lucía Martínez, Francisco Vasallo, Rut Lorenzo, Nuria Val, Aída Baroja, Andrés Nodar, Maximiliano Álvarez
 Hospital Univeritario de Vigo. Spain

BACKGROUND: Invasive pneumococcal disease (IPD) is defined as isolation of *Streptococcus pneumoniae* in blood or another organic sterile fluid. More frequent clinical presentations are pneumonia, meningitis and primary bacteraemia. Information about epidemiology, clinical characteristics and prognosis of atypical IPD (aIPD) is limited.

MATERIAL AND METHODS: A retrospective study was performed in our institution including pediatrics and adult patients. All cases of IPD from January 1992 through December 2014 were reviewed. Epidemiological, clinical data and outcome of all these patients were analysed. Serotypes and antibiograms were also reviewed. aIPD was defined as IPD excluding cases of pneumonia, meningitis or primary bacteraemia. We performed a logistic regression analysis to identify mortality risk factors.

RESULTS: In total 389 patients with IPD were identified and 29 (7%) of them met aIPD criteria. Clinical characteristics of the patients and comparison between both groups are shown in Table 1. Serotypes included in 13-valent vaccine were isolated in 34.5% being 3, 18C and 19F the most frequent in aIPD patients. More frequent clinical presentation of aIPD was: spontaneous bacterial peritonitis (4 cases), septic arthritis (3), endocarditis (3), pyomyositis (2) and cholangitis (2). In patients with aIPD strains isolated were more resistant to antimicrobial tested (Table 2). Case fatality, defined as 30-day mortality, in all cases of IPD was 10.3% and it was higher in those with aIPD (7.1% vs 13.9%, $p=0.089$). In multivariate analysis the only mortality associated risk factor was Pitt score >2 (OR 1.56 [IC95%1.19-2.04]).

Table 1. Clinical characteristics of patients with IPD an aIPD

	TOTAL	aIPD (n=29)	IPD (n=360)	p
Sex, male (%)	221 (56.8)	17 (58)	230 (64)	0.56
Age, year \pm SD	50 \pm 27.8	51 \pm 26.2	51 \pm 27.6	0.98
Charlson index >2 , n(%)	98 (25.7)	11(38)	87 (28)	0.15
-Neoplasia, n(%)	53 (14)	7 (24)	46 (15)	0.17
-Cirrhosis, n (%)	24 (6)	4 (14)	20 (6.5)	0.12
13V serotype, n (%)	248 (64)	14 (46)	234 (65)	0.10
30d-mortality, n (%)	26 (6.6)	4 (14)	22 (7)	0.08

Table 2. Antimicrobial profile of both groups.

	aIPD (n=29)	IPD (n=360)	P
Multiresistant strains, n (%)	7 (24)	29 (8)	0.019
MIC penicillin >0.12 , n (%)	12 (41)	75 (21)	0.019
MIC clindamycin >1 , n (%)	9 (31)	50 (14)	0.015

CONCLUSIONS: Atypical invasive pneumococcal disease is a rare entity and affects to patients with different comorbidities. Strains isolated in these patients present higher probability to be resistant to penicillin, clindamycin and erythromycin or multiresistant strains