P0481
Paper Poster Session
Gram-positive and Gram-negative bacteremia

Clinical and microbiological characteristics of cases of atypical invasive pneumococcal disease

Adrian Sousa*[1], Maria Teresa Pérez-Rodríguez[1], Lucia Martinez-Lamas[2], Francisco Vasallo[3], Rut Lorenzo Castro[1], Nuria Val-Domínguez[1], Aida Baroja[1], Andrés Nodar[1], Maximiliano Álvarez-Fernández[3]

[1]*Hospital Universitario de Vigo, Internal Medicine-Infectious Disease Unit, Vigo, Spain*

[2]*University Hospital of Vigo, Microbiology, Vigo, Spain*

[3]*Hospital Universitario de Vigo, Microbiology, 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. Although there have been described cases of endocarditis, spontaneous peritonitis or skin and soft tissue infection caused by *S. pneumoniae,* there is few information about epidemiology, clinical characteristics and prognosis of atypical IPD (aIPD).

Material/methods: A retrospective study was performed in our institution including paediatrics and adults 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. aIPD patients group 58.6% were male, with a median age of 58 years [IQR 0-105 years], 41.7% were over 65 year-old and 17.2% under 5 year-old. Patients have several comorbidities, and 51.7% had a Charlson Index >=2. Even though 81.9% of patients were diagnosed after conjugated vaccine implementation (7V and/or 13V), only one had been vaccinated. More frequent clinical presentation of aIPD was: spontaneous bacterial peritonitis (4 cases), septic arthritis (3), endocarditis (2), pyomyositis (2) and cholangitis (2). Serotypes included in 13-valent vaccine were isolated in 34.5% being 3, 18C and 19F the most frequent in aIPD patients. Comparing IPD and aIPD cases we observed more patients with neoplasia (15% vs 25%, p=0.177) and cirrhosis (7% vs 14%, p=0.128) in patients with aIPD. A lower proportion of 13V serotypes (65% vs 46%, p=0.103), were identified in patients with aIPD and no cases of aIPD caused by 19A serotype were found. Furthermore, in patients with aIPD, strains isolated were more resistant to antimicrobial tested. A greater number of multiresistant strains were identified (8% vs 24%, p=0.019), and also more strains with minimum inhibitory concentration (MIC) of penicillin >0.12mg/L (21% vs 41%, p =0.019), MIC erythromycin (20% vs 31%, p = 0,155) and MIC clindamycin >1mg/L (13.9% vs 31%, p=0.015) were isolated in aIPD. 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]).

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.