EPIDEMIOLOGY OF PNEUMOCYSTIS PNEUMONIA IN PATIENS WITHOUT HIV INFECTION IN SPAIN (2008-12)

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INTRODUCTION AND PURPOSE

- In developed countries a substantial decline in the incidence of *Pneumocystis pneumonia* (PcP) has been observed in HIV-patients after the widespread use of anti-*Pneumocystis* chemoprophylaxis and with the introduction of highly active antiretroviral therapy during the 1990s. However, the incidence of this infection seem to be growing among non-HIV patients, whose risk features are worse defined and where there is few available information in our country.
- **THE AIM** of this study was to evaluate the incidence, risk factors and epidemiological features of PcP in non-HIV patients during the 2008-2012 period in Spain.

METHODS

- **DESIGN:** Observational cross-sectional study
- **STUDY POPULATION:** patients hospitalized in Spain whose main diagnosis of hospital discharge was PcP (CIE-9-MC 136.3) from 2008 to 2012.
- **VARIABLES:** number of patient, HIV status, age, sex, length of stay, weight of diagnosis-related-groups (DRGs), cost of episode, re-admissions within 30 days after discharge, mortality, month and season of hospital admission and risk group for PcP.

RESULTS

CMBD, Basic Minimun Set of Data

Seasonal distribution

N 4554
Non HIV 1204 (26,44%)
VIH 3350 (73,56%)

Risk factors for PcP in the study population and annual evolution of risk categories. (CMBD, 2008-2012)

Annual evolution of study variables in patients with PcP without HIV infection hospitalized in Spain (CMBD, 2008-2010)

Year	n	Age (years) average $\pm$ SD	Stay (days) average	DRGs weight average $\pm$ SD	Costs (Euros) Average $\pm$ SD	Re-admissions (%)	Mortality (%)
2008	201	56 $\pm$ 19,9	25,5	2,5 $\pm$ 1,9	10534,1 $\pm$ 7916,8	26,4	24,9
2009	255	55,9 $\pm$ 19,1	23,4	2,5 $\pm$ 2,1	10598 $\pm$ 8835,7	22,3	19,5
2010	193	57,2 $\pm$ 17,8	26,3	2,6 $\pm$ 3,5	12567,3 $\pm$ 17288,3	23,4	29,7
2011	256	57,8 $\pm$ 17,6	23,7	2,5 $\pm$ 3,4	12631,9 $\pm$ 17143,6	23,8	27,7
2012	299	61,5 $\pm$ 17,2	25,8	2,7 $\pm$ 4,1	13827,1 $\pm$ 21452	28,1	26,4
Average	240,8	57,9 $\pm$ 18,3	24,9	2,6 $\pm$ 3,2	12138 $\pm$ 15900,7	24,9	25,5
p	<0,0001**	0,002*	0,644*	0,979*	0,086*	0,572**	0,115**

SD, standard deviation; DRGs, Diagnosis-related groups; *ANOVA; **Chi-square test

CONCLUSIONS

1. PcP is still being a frequent disease in Spain, with a steady incidence, due to a significative increase of non HIV-patients, and a parallel decrease in HIV-related cases.
2. Mortality among non HIV-patients is high, with a higher age and assitance-related costs being observed, despite no increase in complexity nor stay duration.
3. Main risk factors for PcP in non HIV-patients are haematological malignancies, chronic respiratory illnesses and solid tumors, but there is still a high number of cases with no predisposing factors identified.
4. In our research, no seasonal differences in PcP incidence were seen.