CAP and HCAP are different?  
An unresolved question

We read with interest the recent article by Polverino et al. Data of this study show a very low incidence of multidrug-resistant pathogens (MDR) in patients with community-acquired pneumonia (CAP) and healthcare-associated pneumonia (HCAP); authors conclude that microbial aetiology of HCAP does not differ from CAP, and that patients with HCAP in Spain do not need nosocomial antibiotic coverage. Surprisingly, the reported data conflict with a recent prospective study by Giannella et al., conducted in 72 internal medicine wards in Spain, and enrolling 1002 patients; in this study *Pseudomonas aeruginosa* and methicillin-resistant *Staphylococcus aureus* caused 17% and 12.3% of HCAP, respectively; moreover, HCAP was an independent risk factor for pneumonia due to difficult-to-treat micro-organisms.

How can these differences be explained? The substantial differences observed in two large multicentric populations of a same country may be indicators of two important problems: (1) since most patients
of the study of Polverino et al were hospitalised in pneumology wards this may introduce a selection bias in term of epidemiology, diagnostic procedures and outcomes; patients hospitalised in internal medicine wards may be more frequently affected by multiple comorbidities and more likely to be repeatedly exposed to the healthcare setting. It is known that patients hospitalised in internal medicine wards may be more frequently affected by multiple comorbidities and more likely to be repeatedly exposed to the healthcare setting.

Since data about microbiology of CAP and HCAP are contradictory, probably we need future interventional studies to define the role of MDR pathogens in patients with community-onset pneumonia. Until then, an individualised risk assessment for MDR organisms appears reasonable in patients fulfilling HCAP definition, to determine which patients presenting with pneumonia may require broad-spectrum antibiotic coverage.

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