Healthcare-associated pneumonia and Hospital-acquired pneumonia - bacterial etiology, antibiotic resistance and mortality.

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Background: Healthcare-associated pneumonia (HCAP) is considered a subgroup of Hospital-acquired pneumonia (HAP) as per American thoracic society/ Infectious Disease Society of America guidelines due to a higher incidence of antibiotic resistance in HCAP. But recently some European studies have advocated HCAP as an entity similar to Community-acquired pneumonia. Our study aims at finding microbial etiology and clinical outcomes of HCAP.

Objective: To study microbial etiology and clinical outcomes of HCAP.

Material/methods: A prospective single center case-control study was done over two years, from August 2013, including, n=318 patients, divided into two groups, HCAP (n=165) and HAP (n=153). Data on patient characteristics, microbial etiology, APACHE - II scores, clinical outcomes, and mortality were analyzed.

Results: Patients with HCAP had more comorbidities and severity of pneumonia was similar to HAP [APACHE - II score ≥ 17 - HCAP (n=82) and HAP (N=83)]. Escherichia coli (n = 30, 18%) and Acinetobacter baumanni (n = 62, 41%) are the most commonly isolated bacteria in HCAP and HAP groups, respectively. Also antibiotic resistant strains were isolated from 87 cases in HCAP [HAP,
In HCAP, n=38 in-Hospital mortalities were recorded [HAP, n=60], with APACHE-II score ≥17 [OR=14, p=0.00], Septic shock [OR=4.5, p=0.00] and Consolidation [OR=2.9, p=0.007] being strongest predictors of in-hospital mortality.

**Conclusions:** The patient characteristics in HCAP, its clinical outcomes, microbial etiology and high incidence of antibiotic resistant bacteria, prove HCAP as an entity closer to but less severe than HAP.