

eP073

ePoster Viewing

Community-acquired pneumonia

COMMUNITY-ACQUIRED PNEUMONIA CAUSED BY STAPHYLOCOCCUS AUREUS IN FRANCE: INTERIM RESULTS OF A PROSPECTIVE COHORT STUDY

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Study design: Prospective cohort study of *S. aureus* community-acquired pneumonia (CAP) with observational and interventional (host genetic) arms including patients with Panton-Valentine Leukocidine (PVL)-associated necrotizing pneumonia (cases), PVL-negative patients (controls), and their family members.

Objectives: The main objectives are to: i) investigate the role of PVL as an independent factor of severity in *S. aureus* CAP; ii) identify clinical/biological factors associated with the disease prognostic; iii) assess the level of antibiotic sensitivity of *S. aureus* strains and iv) assess the genetic susceptibility of the host.

Methods

Setting: Adult and children presenting with signs and symptoms of *S. aureus* CAP and hospitalized in intensive care units in France. The study started in January 2011.

Data collection: Information on demographic variables, medical history, signs and symptoms at presentation, radiological, laboratory and clinical findings during 7 days following hospitalization are collected using an Excel case report form. Biological samples are also collected.

Statistics: Study population characteristics were defined by descriptive analysis. Logistic regression analysis was performed to assess factors associated with death.

Genomic: Orfeome of 50 patients and their relatives is assessed by whole genome sequencing.

Results

Participants: To date, 114 patients (59/55) were enrolled in more than 100 ICUs across France. Clinical and biological data are currently available for 70 patients, including 14 children (<18 years of age) and 56 adults.

Main results: Median age was 37.5 and 58 years in PVL-positive (n=38) and PVL-negative (n=32) patients respectively (p=0.001). Prevalence of MRSA strains was 18.8% in PVL-positive and 21.8% in PVL-negative strains. Clinical features of PVL-positive patients differed from the others by higher rates of diarrhoea and erythrodermia at admission and erythrodermia, and pulmonary abscess during hospitalization. Haematological findings were not different between the 2 groups. Appropriate empirical antibiotic therapy and antibiotics with antitoxins properties have been given to the large majority of patients at admission. The overall mortality rate was not different between PVL-negative and PVL-positive patients (40.0% vs 23.3%; p=0.2), but at day-7 the rate of death was significantly higher among PVL-positive patients (31.6% vs 6.6%, p=0.006). Regardless of PVL status, death was associated with haemoptysis (p=0.02) during hospitalization. Peaks of influenza seasons overlapped with an increase in the incidence of *S. aureus* CAP. Orfeome of 30 Patients is currently under analysis.

Conclusions: The interim results of our prospective study confirm that PVL remains a factor of severity in *S. aureus* CAP. This necrotizing disease occurs rather in young adults and is characterized by rapid death. The prevalence of MRSA in PVL-positive strains was high and should be taken into consideration to optimize the empirical treatment of severe *S. aureus* CAP. Parallelism between influenza epidemics and higher incidence of CAP suggests a relationship between viral infection and necrotizing pneumonia.