

Type: Poster Presentation

Final Abstract Number: 58.009

Session: Bacterial Infections

Date: Saturday, April 5, 2014

Time: 12:45-14:15

Room: Ballroom

***Staphylococcus aureus*, *Streptococcus pneumoniae*, and *Streptococcus pyogenes* DNA are common in febrile patients in Senegal**F. Fenollar¹, O. Mediannikov², C.S. Sokhna², H. Bassene², G. Diatta², A. Tall³, D. Raoult¹¹ Méditerranée Infections, Marseilles, France² IRD -URMITE, Dakar, Senegal³ Institute Pasteur de Senegal, Dakar, Senegal

Background: The repertoire of fever-causing bacteria in Africa has been neglected. This study aimed to compare the epidemiology of *Staphylococcus aureus*, *Streptococcus pneumoniae*, and *Streptococcus pyogenes* bacteremia in Senegal.

Methods & Materials: From June 2010 to March 2012, we conducted a prospective study on 2,024 blood specimens from febrile patients from 5 different areas in Senegal and 400 non-febrile individuals from 1 of this area. Quantitative real-time PCR targeting *Staphylococcus aureus*, *Streptococcus pneumoniae*, and *Streptococcus pyogenes* were performed.

Results: The prevalence of *S. pneumoniae* in febrile patients was 21.2% (429/2,024). Infections occurred primarily during the dry season rather than the rainy season (23.9% vs. 19%, respectively; $p=0.01$) and were significantly higher in patients less 16 years (24.8%) than older (13.2%; $p < 10^{-3}$). The highest prevalence was observed in Kedougou, reaching 32.6% and was significantly higher than that of the 4 other sites: Casamance (25.3%, $p=0.03$), Keur Momar Sarr (21.5%; $p=0.005$), Niakhar (18%, $p < 10^{-3}$), and Sine-Saloum (16%; $p < 10^{-3}$). The prevalence of *S. aureus* in febrile patients was 19.8% (400/2,024); infections occurred primarily during the rainy season rather than the dry season (25.1% vs. 13.3%, respectively; $p < 10^{-3}$). The occurrence of *S. aureus* was not correlated with the age. The highest prevalence was observed in Kedougou, reaching 33% and was significantly higher than that of 3 other sites: Casamance (22.9%, $p=0.003$), Niakhar (16.1%, $p < 10^{-3}$), and Sine-Saloum (13%; $p < 10^{-3}$). The prevalence of *S. pyogenes* in febrile patients was 4.6% (93/2,024); infections occurred equally during the dry season and rainy seasons. The occurrence of *S. pyogenes* was higher in patients less 16 years (5.6%) than older (2%; $p < 10^{-3}$). The highest prevalence was observed in Niakhar reaching 10.1% and was significantly higher than that of the other sites: Kedougou (6.2%, $p=0.001$), Casamance (4.6%, $p < 10^{-3}$), Keur Momar Sarr (4.5%; $p < 10^{-3}$), and Sine-Saloum (2%; $p < 10^{-3}$). Among apyretic people, 7 were positive for *S. aureus* (1.75%), 1 for *S. pneumoniae* (0.25%) and 0 for *S. pyogenes*.

Conclusion: *S. aureus* and *S. pneumoniae* DNA are common in blood of patients with fever in Senegal.

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The radiological manifestations of acute exacerbations of COPDC. Feldman¹, G. Richards¹, J. Smilg²¹ University Witwatersrand, Johannesburg, South Africa² University Witwatersrand, Johannesburg, South Africa

Background: Despite the fact that a considerable number of exacerbations of chronic obstructive pulmonary disease (AECOPD) (~60%) are said to be due to infection, most commonly bacterial, there have been few descriptions of the radiological manifestations of the disease, which is the focus of this study

Methods & Materials: This was a retrospective record and radiology review of consecutive patients with AECOPD, who were admitted to the Pulmonology Ward of the Charlotte Maxeke Johannesburg Academic Hospital and in whom a chest radiograph was available for review. The study was approved by the Human Research Ethics Committee of the University of the Witwatersrand. Various demographic, clinical and lung function data for the patients were recorded, and the admission chest radiograph was reviewed by a trained radiologist (JS).

Results: A total of 34 patients were entered into the study of which 18 were male and 16 female. The age ranged between 43 and 85 years. In 17 cases the underlying COPD was classified as severe or very severe (incomplete data). One radiograph was considered unsuitable for reporting and all but 4 of the remaining patients had evidence of hyperinflation. Thirteen patients were documented to have bullae and 6 patients, bronchiectasis. Twelve patients had evidence of consolidation of the lung (unilobar in 10) compatible with pneumonia. In 16 cases sputa were negative for AFB, but no positive blood culture or positive sputum Gram stain was reported. The range of hospital stay was 1-14 days and all patients survived.

Conclusion: In this study of patients with AECOPD, consolidation of the lung compatible with pneumonia appears to be relatively common (35% of cases), although routine microbiology appears to be commonly negative. The outcome of the patients with pneumonia was good.

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