

**O1152 The clinical spectrum of co-infections in severe imported malaria in adults**

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**Background:** Co-infections during severe malaria have been widely studied among children in the endemic setting and there is evidence they result in worse outcome. However, little is known about both the epidemiology and the impact of these co-infections in imported malaria in adults. In this study we sought to describe co-infections during severe imported malaria in adults and to identify associated factors.

**Materials/methods:** We conducted a multicenter observational ancillary study in 52 French intensive care units (ICU), derived from a retrospective (2000-2006) and a prospective (2007-2010) studies. We identified patients admitted for severe imported falciparum malaria according to 2000 World Health Organization criteria adapted for imported malaria. Clinical and demographic data were collected from medical charts using standardized case-report forms. Factors associated with co-infections were identified by univariate and multivariate analysis using a logistic regression model.

**Results:** We reported 555 patients admitted to ICU for severe imported malaria. Mean age was 44 years, and a majority were male (69%). Among them, 129 patients (23%) presented at least one episode of co-infection.

At ICU admission, 40 patients presented with community-acquired infection, and 5 with anterior hospitalization had nosocomial infection. Pulmonary (35%), blood (32%) and urinary tract infections (18%) were most common. *Escherichia coli* and non ESBL Gram-negative bacilli were predominant: 26 and 24% of documented micro-organisms. By multivariate analysis, female sex (OR 3.25 [1.60-6.58]), respiratory distress at admission (OR 3.98 [1.94-8.19]), and HIV-positive status (OR 3.40 [1.14-10.2]), were independently associated with community-acquired co-infection.

During hospitalization, 92 patients presented at least one nosocomial infection episode. Pulmonary, blood and urinary tract infections were most common: 65, 12 and 11% respectively. *E. coli*, non ESBL Gram-negative bacilli, and methicillin-sensitive *Staphylococcus aureus* were predominant: 29, 18, and 11% of documented micro-organisms.

Overall ICU mortality was 9% with no significant difference between patients with or without coinfections.

**Conclusions:** Our study shows that in a large population of adults admitted to ICU for severe imported malaria, 23% will develop a co-infection, mainly pulmonary infections and bacteremia. These results emphasize the need to search for co-infection in these patients and make therapeutic adaptations accordingly.