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Poster Session V

Worldwide spread of carbapenem resistance

**INTRODUCTION OF HIGHLY-RESISTANT BACTERIA (HRB) TO A HOSPITAL FROM PATIENTS REPATRIATED OR RECENTLY HOSPITALISED IN A FOREIGN COUNTRY**

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**Objectives:** In France, guidelines were issued to control the importation of HRB from patients repatriated or with a history of recent hospital stay in a foreign country. We performed a 15-month prospective surveillance of patients suspected to be colonised with HRB admitted to a single French university hospital.

**Methods:** Prospective survey of patients repatriated or having been hospitalised during the last year in a foreign country from July 20, 2012 to October 20, 2013 in a 950-bed University Hospital providing both primary and tertiary care with a high proportion of patients originating from a foreign country. Suspect patients were detected through notification by the staff of clinical units, the bacteriology laboratory and from our administrative system. Demographic characteristics, history of recent hospital stay, in hospital data and microbiological data were prospectively collected. Screening included extended spectrum beta-lactamase producing enterobacteriaceae (ESBLPE), Methicillin-resistant *S.aureus* (MRSA), glycopeptides-resistant enterococci (GRE), carbapenemase-producing enterobacteriaceae (CPE) and carbapenem-resistant *Acinetobacter baumannii* (CRAB). Culture of GRE and CPE was performed after an overnight enrichment of rectal swabs.

**Results:** Overall, 132 patients were included, and 15 (11%) were found as colonised with HRB. 24 HRBs were identified: 9 were CPE, 4 OXA-48, 2 NDM-1, 2 KPC and one IMP-2 carbapenemase. All 6 GREs were *E. faecium*, 5 with *vanA* and one with *vanB* gene. Eight of the 9 CRAB produced a carbapenemase, 6 OXA-23, one OXA-24 and one NDM). 63 patients (48%) were colonised with at least one multidrug resistant micro-organism (MRMO), 5 with MRSA and 60 with ESBLPE of whom 47 (58%) were *E. coli*; 20 were co-colonised with 2 different ESBLPE and 2 with ESBLPE and MRSA. The prevalence of HRB was higher in patients repatriated from a foreign country (n= 10/35, 28%) than in patients with a history of hospitalisation during the last year (n= 5/92, 5%). Most patients originated from a North African country (n= 52, 39%). The prevalence of HRB colonisation was higher in patients receiving antibiotics at admission to our hospital (n= 11/54, 20%), and in patients admitted to the ICU (n= 7/24, 29%). Of the 15 episodes with HRB, 4 were responsible for secondary cases, three with CRAB in the medical ICU and 1 with GRE. During the same period, we identified 6 patients with HRB (2 CPE, 2 GRE and 2 CRAB) and a history of recent hospital stay abroad, but without alert from the clinical wards.

**Conclusions:** The prevalence of colonisation with HRB and MRMO is high in patients after a hospital stay abroad. This should lead to systematically screen these patients at admission, especially in hospitals and countries with still low rates of HRB, with the goal to prevent spread of these dreadful bacteria. CRAB is at higher risk of transmission.