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Colonization and infection of multidrug resistan *Acinetobacter baumannii*

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OBJECTIVES

The objective of this study was to determine the occurrence of colonization and subsequent infection with multidrug-resistant *Acinetobacter baumannii* (MDRAB) in the Hospital Clínico Universitario Virgen de la Arrixaca (HCUVA), Murcia (Spain).

METHODS

Surveillance cultures (SC) including rectal swab (RS), pharyngeal swab (PS) and/or skin swab (SS) were obtained. The samples were cultured in Mac Conkey agar with a cefotaxime disk. All cefotaxime resistant colonies were studied. The identification and antibiotic susceptibility testing were performed with Vitek 2® (BioMèrieux).

RESULTS

From January 2012 to October 2013, a total of 273 patients were screened (168 admitted in two Critical Care Units, 91 admitted in surgical areas and 14 admitted in medical areas). 55 patients (20.1%) were colonized by MDRAB (Figure 1).

The average was 66.8±15.5 (15-86) and 35 colonized patients were male (63.6%).

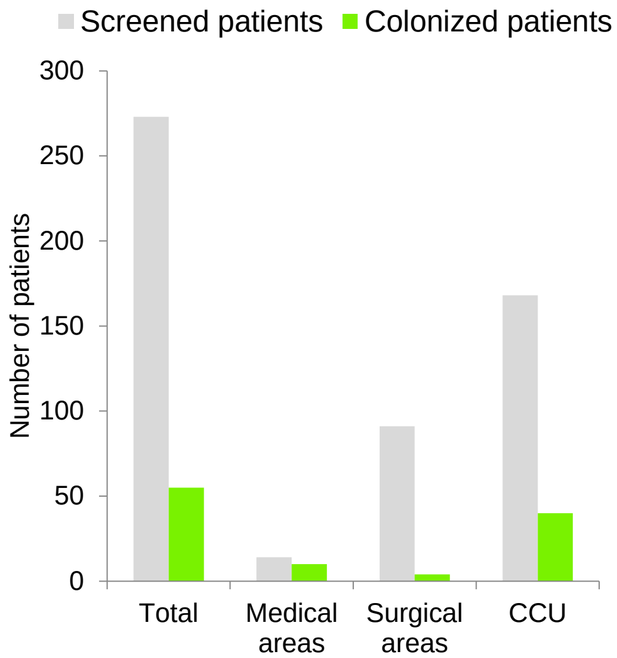

Figure 1. Total of screened patients and colonized patients in different areas

1203 samples were collected: 405 RS (33.6%), 375 PS (31.2%) and 423 SS (35.2%). MDRAB was isolated in 97 samples (8%), 47 RS (47/405, 11.6%), 28 PS (28/375, 7.5%) and 22 SS (22/423, 5.2%) (Figure 2).

All the strains were resistant to carbapenems. Nineteen patients (34.5%) became colonized during hospital stay. MDRAB was isolated in 22 patients (44%) after the positive SC (mean 3.6 days, 0-9 days): 11 bronchial lavage fluids (BLF), 5 wounds and surgical site infections, 3 bacteremias

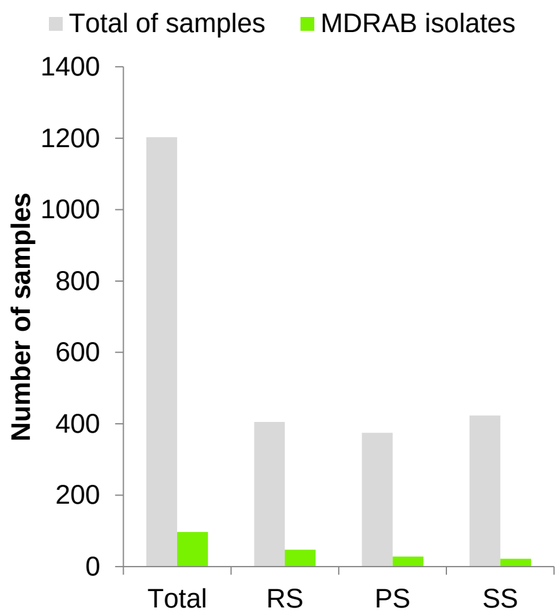

Figure 2. Total of samples collected and MDRAB isolates in surveillance cultures.

and 3 complicated urinary tract infections (count >10.000CFU/ml) (Figure 3). In BLF and wounds and surgical site infections, colonization or infection can consider different according medical criteria.

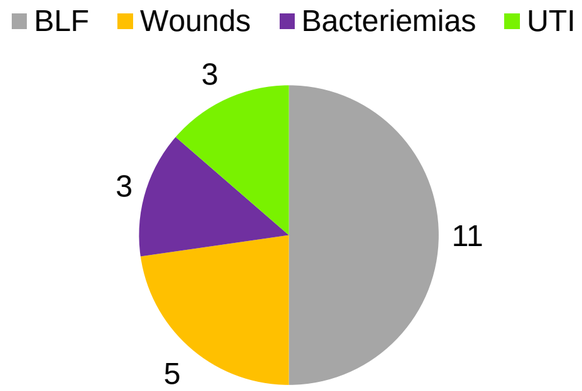

Figure 3. First samples with MDRAB isolates after the positive surveillance culture.

CONCLUSION

Isolating carriers of MDRAB is the main measure to prevent its spread. The RS samples showed greater detection of MDRAB carriers. High percentage of patients had a serious infection by MDRAB after the SC. MDRAB may be carried for long durations.