

INFECTIOUS DISEASES

August 21-23, 2017 San Francisco, USA

Epidemiology of multi-resistant bacteria in the hospital environment of high-risk infectious units, Ibn Tofail Hospital- University Hospital Center of Marrakech

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Objective: The objective of this study is to analyze the qualitative and quantitative microbial composition of the environment of high risk infectious units at the Ibn Tofail hospital, CHU Mohammed VI, Marrakech.

Material & Methods: This is a prospective study carried out in four units (two operating units, two adult intensive care units ICU) of CHU Mohammed VI Marrakech during a period of four months (March to June 2014). The samples concerned inanimate surfaces and the hands of different staff. The level of antibiotic resistance was studied by the diffusion method in agar medium. The choice of antibiotics and the criteria for interpretation of the antibiogram were made according to the standards of the European Committee on Antibiograms (EUCAST).

Results: 95 bacterial strains were isolated from the 125 samples. The antibiotic resistance profile showed that 46% (44/95) of the strains were multi drug resistant, 19% of them were *acinetobacter baumannii* resistant to imipenem (ABRI), 17% of the *Enterobacteriaceae* producing extended spectrum beta-lactamases (ESBLE), and 8% was methicillin-resistant *Stapylococcus aureus* (MRSA). The lowest rate (4%) was obtained for *pseudomonas aeruginosa* resistant to carbapenem (PARC). The ABRI was mainly found in the inanimate surfaces of ICU, the EBLE were predominant in the surfaces of the operating units. However, the MRSA was isolated mostly from the staff handprints and the surfaces of the four studied units.

Conclusion: The alarming presence of MDR bacteria in the hospital environment urges the hospital actors (biologists, hygienists, clinicians, and nursing staff) to double their efforts to control these bacteria.

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