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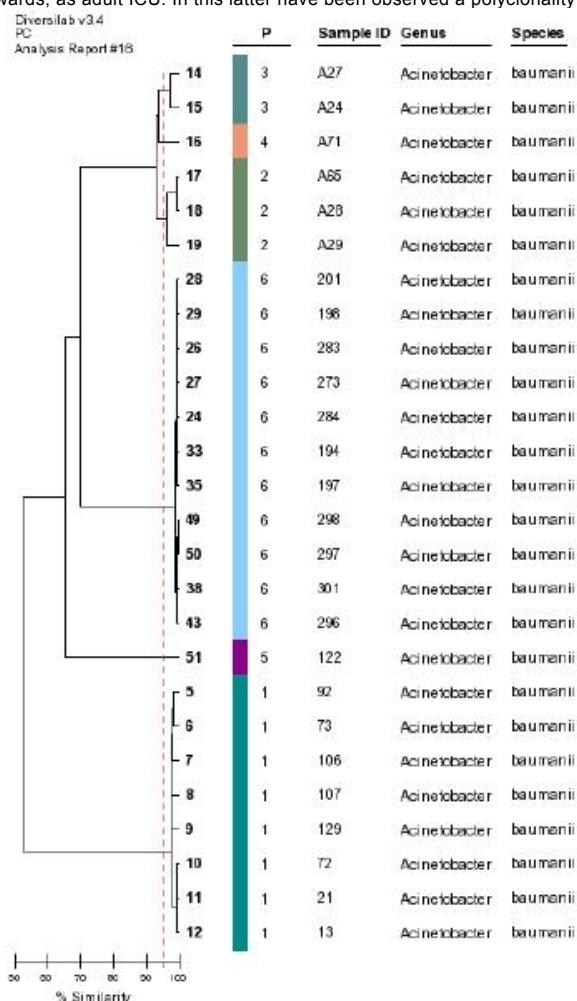
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Objectives: Imipenem-resistant *Acinetobacter baumannii* (IRAB) have been described for years as a serious pathogen causing nosocomial infection (NI) in acute hospitals. However at the Hospital Universitario de Canarias, a teaching hospital of 667 beds, we had only detected sporadic NI by IRAB until 2012, in which the incidence density was found to be eight times higher than expected (ID IRAB 2011 = 0.19 ‰, N=4 vs. ID IRAB 2012 = 1.55 ‰, N=31), despite of the infection control measures carried out at the first signs of this increase. The aim of this study is to describe the epidemiological characteristics of patients affected by IRAB in 2012, the source of infection and / or colonization, hospital spreading and the genetic relationship of the isolates involved in the more affected Units.

Methods: cross-sectional study of patients with IRAB in 2012, both from clinical specimens as screening for rectal and pharyngeal carriers, collecting medical records of epidemiological variables. The isolates from clinical specimens were classified according to CDC 2008 criteria. 46 isolates were selected for molecular typing by rep-PCR (DiversiLab® bioMérieux).

Results: In 2012 a total of 114 IRAB positive samples belonging to 75 patients were obtained: 83.3% (95) from clinical specimens and 16.7% (19) from screening samples. In clinical samples, 32.6% (31) were NI for 26 patients, 57.9% (55) hospital colonizations (HC) for 47 patients, 7.4% (7) were extra-hospital infections and 2.1% (2) extra-hospital colonizations. In NI, surgical site infections (32.2%) and respiratory and pneumonia (25.8%) infections were more prevalent, while the HC highlighted exudates from different sources (58.1%) and respiratory samples (21.8%). Patients had a mean age of 68.4 ± 16.8 and 65.8 % were male. The average stay prior to isolation of a HC or NI in clinical sample was 28.1 ± 29.4 days. Patients from 8 medical services, 8 surgical services and 3 ICUs were affected: mainly Internal Medicine (20%), medical-surgical ICU (18.7%), Vascular Surgery (13.3%) and Neurosurgery (8%). By analyzing the temporal evolution of the cases, there were two waves, one between weeks 7 and 12 and another between weeks 26 and 33. The strains were grouped into six patterns after performing the rep-PCR (P1 -P6). 98% of the strains isolated in hospital wards belonged to P6, whereas in the adult ICU were grouped into 5 different patterns. (Figure1).

Conclusions: IRAB has emerged in our hospital in 2012 and has established itself as an endemic strain due to the older and long-stay patients admitted to hospital, affecting both medical and surgical wards, as adult ICU. In this latter have been observed a polyclonality probably due to the diverse backgrounds of patients and the



increased antibiotic pressure.