

Establishment and Clonal Dissemination of the Methicillin-Resistant *Staphylococcus aureus* UK-16 Epidemic Strain in a Spanish Hospital

The prevalence of antimicrobial-resistant bacteria has dramatically increased in hospitals worldwide during the last decades. Within hospitals, *Staphylococcus aureus* is a major human pathogen, with methicillin-resistant *S. aureus* (MRSA) causing serious hospital complications (3).

Genotype analyses of MRSA hospital isolates have confirmed the existence of epidemic clones with great capacity to spread and to fit in hospital environments. One of these clones, UK EMRSA-16, is one of the two main causes of MRSA infections in the United Kingdom, and together UK EMRSA-15 and EMRSA-16 cause 95% of MRSA bacteremias. UK EMRSA-16 has been studied extensively and has been confirmed to be the causal agent of most hospital staphylococcal outbreaks in the United Kingdom. Although it has been considered to be largely restricted to the United Kingdom, two recent multicenter studies have shown that this clone is also present in Belgium, Finland, Sweden, and Denmark (2, 4).

In this letter, we briefly and urgently communicate that we have detected the UK EMRSA-16 multiresistant clone as an epidemic clone in a university hospital in Tenerife, Spain. To our knowledge, this is the first time that hospital establishment of the EMRSA-16 clone in Spain has been reported. We have ensured the clonal nature of our isolates by development and integrative analyses of three different molecular approaches: pulsed-field gel electrophoresis, staphylococcal cassette chromosome *mec* (SCC*mec*) multiplex PCR assay, and multilocus sequence typing (1, 4, 5). Results from these analyses show that the clone is ST36-MRSA-II according to the nomenclature of Enright et al. (2) (UK-16 pulsotype, SCC*mec* type II, ST36). We have data from 1998 to 2002 that show how it started to colonize the hospital in 1999 and progressively displaced other MRSA clones, such as the Iberian one. At this time, the epidemic UK-16 clone constitutes 63.5% of the MRSA isolates of the hospital, and its spread has coincided with a substantial increase in the incidence of MRSA infections over the last 2 years (results not shown). Indeed, its high epidemicity is thought to be the key to its success in hospitals.

The fact that Tenerife Island is one of the most visited tourist destinations in Europe and has a very high rate of British arrivals each year emphasizes the need, recently pointed out, for closer international collaboration to monitor the spread of

current epidemic strains as well as the emergence of new ones (4).

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