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Publication Only

Antimicrobials: Epidemiology of MRSA, VRE and other Gram-positives

Prevalence of *Staphylococcus aureus* in Aveiro, Portugal, between 2001 and 2012

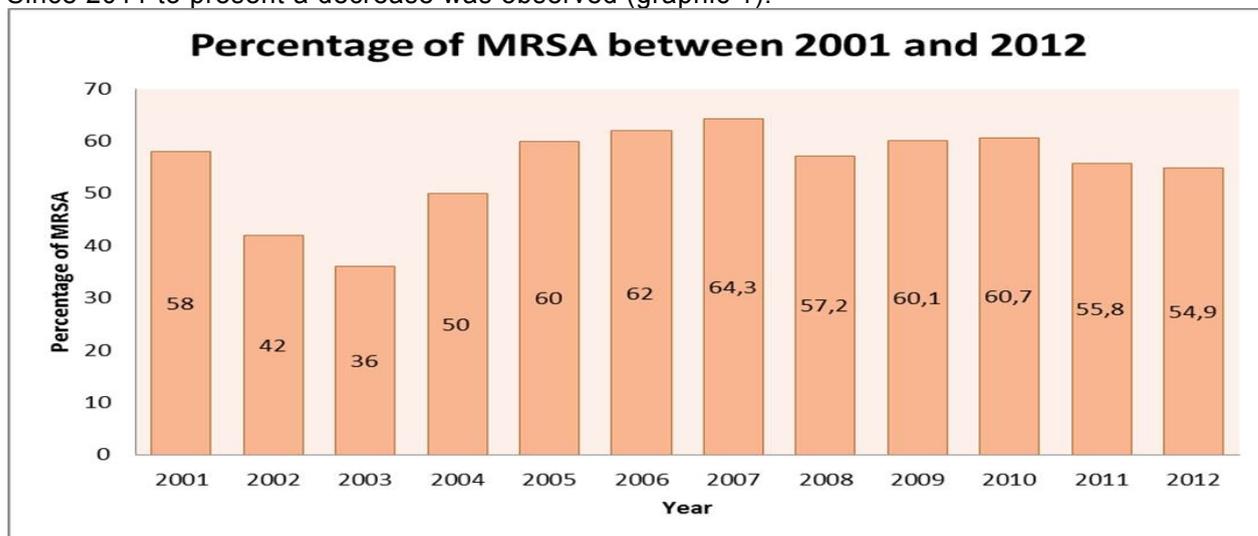
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**Objectives:** At present, methicillin resistant *Staphylococcus aureus* (MRSA) has been increasing as a serious nosocomial and community pathogen, thus the aim of this study was to monitor the prevalence of *S. aureus*, with focus on MRSA, during a period of 12 years, in Centro Hospitalar do Baixo Vouga (CHBV), Aveiro, Portugal.

**Methods:** All the isolates were collected from inpatients and outpatients, at CHBV. The strains were isolated from different biological products and were identified by the automatic VITEK 2 system and Advanced Expert System (VITEK 2 AES) (BioMérieux, Marcy L'Étoile, France). The antimicrobial susceptibility profile to >20 antimicrobial agents was evaluated by CLSI broth microdilution methods and interpreted by CLSI M100-S20 (2010).

**Results:** During 2001-2012, a total of 3081 *S. aureus* were reported, and MRSA incidence was approximately > 50%. This tendency vary over time, the lowest percentage of MRSA was observed in 2003 (36%). However from 2004 onwards the percentage of MRSA increased, being 2007 the year with the highest percentage (64,3%). From 2008 to 2010 the percentage of MRSA varied within 57,2% and 60,7%. Since 2011 to present a decrease was observed (graphic 1).



Graphic 1: Percentage of methicillin resistant *Staphylococcus aureus* between 2001 and 2012

**Conclusions:** Contingency measures, such as, hands hygienic cleaning campaigns applied in collaboration with the infection control commission seems to be producing results in the decrease of MRSA prevalence. Nevertheless, the percentage of MRSA observed in our hospital is very high and requires continued monitoring. Many hospitals of different countries worldwide, including Portugal, are struggling with increasing number of this versatile pathogen.