Methicillin Resistant *Staphylococcus aureus* (MRSA) detection at admission and during hospitalisation at the Brussels Burn Centre

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**Background:** Worldwide MRSA infections pose life-threatening problems among critically ill and elderly. In Belgium the proportion of MRSA/MSSA is 23%, increasing to 35% on Intensive Care Units (ICU). Seen the consequences on morbidity, mortality and cost anti-nosocomial infection strategies are implemented. Collecting and analyzing those data is essential for evaluating and monitoring the situation.

**Methods:** At admission all patients are systematically screened by nasal and peri-anal/or groin region. The swabs are cultured on Chapman medium and consecutively put on Vitek for antibiotic-susceptibility testing. During hospitalization a screening is done two times weekly.

**Results:** From January 2002 till December 2007, 703 patients were admitted at our ICU and 1494 at our Medium Care Unit (MCU). Nasal swabs showed to be the best screening sampling procedure. The mean MRSA positive carriage at ICU admission is 1.5%. An increased trend was observed since 2004 (1 to 4%). At the MCU however a remarkably lower mean admission incidence of 0.5% was observed, with also the same trend for increase since 2004 (0.1 to 0.5). The nosocomially acquired MRSA infection rate is 5% on the ICU and 4% on the MCU. The higher incidence at the ICU admission is probably due to the fact that this patient population includes patients who are referred from another ICU, beside two other risk factors in this population, the age and often a marginal origin from a social-economic lower class.

**Conclusion:** We observe a trend for increase the last 3 years which reflects the presence of MRSA in the community. This increase however is in contrast with the recently reported decrease of MRSA nosocomial infections in the global Belgian hospitalization population. Our nosocomial infection rate stayed at the same level and warrants an improved infection control in the future.


doi:10.1016/j.ijid.2008.05.971