

ORIGINAL ARTICLE

Successful control of methicillin-resistant *Staphylococcus aureus* outbreak at a university department of dermatology

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Abstract

Background Methicillin-resistant *Staphylococcus aureus* (MRSA) is one of the leading strains among multiresistant hospital microflora. In 2003, we noted an increase in the number of MRSA strain 35 among patients at the University of Zurich, Department of Dermatology. At the end of 2003, we implemented additional policies in hospital hygiene, which significantly decreased the number of MRSA infections.

Methods This is a retrospective study on 65 consecutive patients at the Department of Dermatology, University Hospital of Zurich, in whom MRSA contamination was newly diagnosed during the period of 2003–2008. All isolated strains were genotyped. We implemented additional policies as strict hand hygiene and avoidance of sharing the same ointment pots or tubes amongst patients. As soon as the skin disease was healed, decolonization of MRSA was undertaken by a 5-day topical treatment.

Results Of the 65 MRSA patients, 19 (29%) patients carried a genotypical strain (MRSA 35) that was identified to be specific for the Department of Dermatology. Three health care workers (HCWs) were tested positive. The outlined measures reduced the incidence of new transmissions of this specific strain MRSA 35 significantly ($P = 0.001$) with a complete disappearance of new transmissions of MRSA 35 in the year 2008. Of the 65 patients, 15 (23%) patients became long-term carriers, among all (15/15; 100%) had persisting active skin lesions.

Conclusions Strict hand hygiene and avoidance of sharing ointments among patients were highly effective measures in controlling an outbreak of MRSA. Complete or near-to-complete remission of the underlying dermatoses, skin lesions or chronic wounds, is a prerequisite for complete decolonization of MRSA carriers.

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Keywords

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Conflict of interest

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Methicillin-resistant *Staphylococcus aureus* (MRSA) was first detected in the United Kingdom in 1961, subsequently spread throughout the world, and has now emerged as one of the leading strains among multiresistant hospital microflora.¹ Low rates of MRSA are still observed in Swiss healthcare institutions (average 0.93/10 000 patient-days) with variation from 0.24/10 000 patient days in Basel, 0.79 in Zurich to 2.1 in Geneva. To preserve this low level of MRSA, an international approach to a sustained and consistent infection control strategy is necessary.²

The most commonly infected organs by MRSA are the skin and soft tissues which makes it of interest to dermatologists.³ As a matter of fact, an increasing number of MRSA in dermatology departments has been reported in recent studies.^{4,5} This development concerned also our department, the University Department of Dermatology of Zurich, Switzerland. In the summer of 2003, we noted an outbreak of eight new MRSA infections among our inpatients. On genotyping it turned out that all new cases could be attributed to one specific strain which has not been registered