

Short communication

Staphylococcus aureus Screening: Surveillance Data of Five Years

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Abstract

The aim of the study is to investigate the status of nasal MRSA colonization in patients admitted to Istanbul Medipol University Hospital over a 5-year period. The MRSA nasal carriage prevalence was found to be 5.32%. The results indicate that there was an increase in 2014 and 2015 but since then there has been a steady decrease.

Keywords: *Staphylococcus aureus*, methicillin-resistant *S. aureus* (MRSA), surveillance data

Резюме

Целта на изследването е да се установи колонизацията на назалните метицилин-резистентни представители на *Staphylococcus aureus* (MRSA) при пациенти, приети в университетската болница «Медипол» в продължение на 5 години. Резултатите показват, че назалните носители на MRSA са 5.32%. Тези данни очертават тенденция на увеличение през 2014 и 2015 г., но след това се наблюдава постоянен спад.

Introduction

Methicillin-resistant *Staphylococcus aureus* (MRSA) carriage has been determined as a risk factor for endogenous infections. MRSA has been an important health issue as being a common nosocomial agent world-wide. Determination of nasal MRSA carriage is considered as helpful for prevention of resistant-bacterial dissemination and the management of patients with higher risk of infection (Glick *et al.*, 2014; Stenehjem *et al.*, 2013).

Material and Methods

A retrospective surveillance study was conducted at Istanbul Medipol University Hospital between July 2012 and August 2017. We collected culture data of *Staphylococcus aureus* colonization of anterior nares in patients. The specimens were obtained within 24 hours of admission of patients to our hospital. All specimens were inoculated using Blood Agar (Beckton Dickenson, USA). After 24 hours beta hemolysed suspicious colonies were identified with coagulase test (Staphylase Test, Oxoid, UK). For all *Staphylococcus aureus* strains

were tested for oxacillin sensitivity with Kirby-Bauer disc diffusion method. Evaluation was based on CLSI (M100 S-24, M100 S-26) criteria.

Results

During the 5 years period a total of 8453 patients were screened for nasal *S. aureus* colonization. Of these 18.31% (1548) were culture positive with *S. aureus*. The prevalence of MRSA colonization was found to be 5.32% (450) among patients. MRSA rates in respect to different years are shown in Fig. 1. The isolation rates of methicillin-resistant and susceptible *S. aureus* strains of all culture positive samples during the surveillance period is given in Fig. 2.

Conclusions

The MRSA nasal carriage prevalence was found to be 5.32% in 5 years period. There was an increase in the rates of isolation MRSA in 2014 and 2015 but since then there has been a steady decrease. The surveillance of MRSA allows implementation of appropriate infection prevention and control policies.

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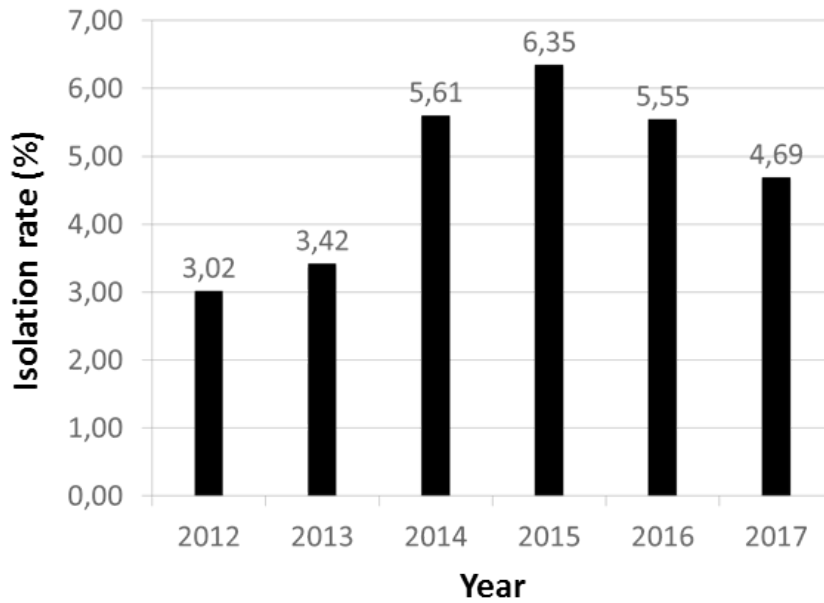


Fig. 1. MRSA positivity rates over years

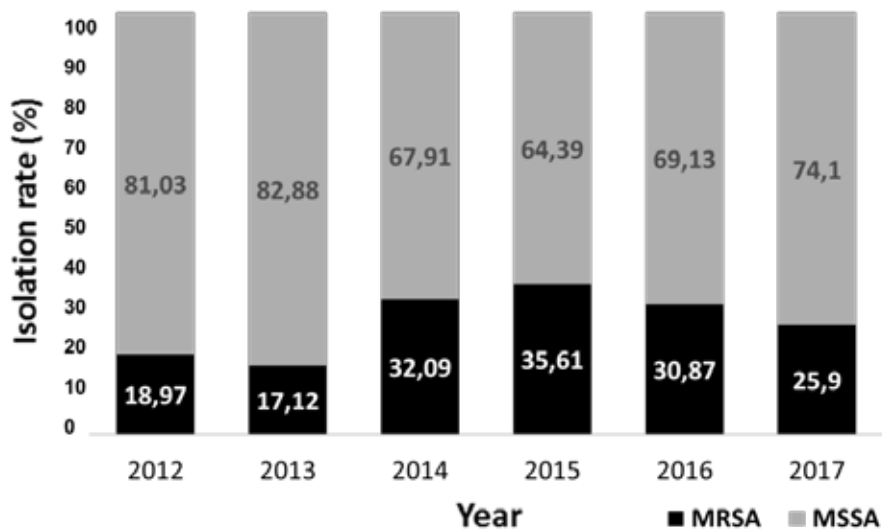


Fig. 2. MRSA and MSSA rates over years

References

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