COMMUNITY-ACQUIRED METHICILLIN-RESISTANT 
STAPHYLOCOCCUS AUREUS AND GENOTYPES 
AMONG UNIVERSITY STUDENTS IN TURKEY

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Abstract. Nasal carriage of Staphylococcus aureus is an important risk factor for nosocomial and community-acquired staphylococcal infections. We investigate the prevalence of community-acquired methicillin-sensitive (CA-MSSA) and -resistant (CA-MRSA), including inducible dormant (ID)-MRSA S. aureus, and genotypes of MRSA strains of nasal cultures from 1,108 university students attending Selcuk University, Turkey. Risk factors were based on replies to a questionnaire. S. aureus was identified using conventional culture methods and a Stapyloslide® latex test. Antibiotic susceptibility and methicillin resistance were determined by a disk diffusion method, and vancomycin susceptibility was performed using an E-test. Identification of mecA and SCCmec types were conducted by PCR and genotypes by pulse field gel-electrophoresis (PFGE). Prevalence of S. aureus was 17%, with 9% being MRSA. Two isolates were SCCmec type III, 11 were SCCmec variant IIIA and one SCCmec type IV. No ID-MRSA was detected. The majority of the isolates were resistant to penicillin and no strain was resistant to vancomycin. Two MRSA strains were PFGE pulsotype A, 9 pulsotype B, 2 pulsotype C, 1 pulsotype D and 3 pulsotype E. Presence of permanent catheter and use of antibiotics in the previous month were risk factors for MSSA colonization and association with medical facilities were risk factors for MRSA carriers. There is a need for multicenter studies in Turkey to investigate CA- and ID-MRSA prevalence and nosocomial infections.

Keywords: Staphylococcus aureus, CA-MRSA, ID-MRSA, nasal colonization, risk factors, Turkey

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