Exclusive Staphylococcus aureus throat carriage : at-risk populations

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BACKGROUND: Approximately 25% of Staphylococcus aureus carriers have exclusive throat carriage. We aimed to identify the populations at risk for exclusive throat carriage to improve sensitivity to detect carriers. METHODS: Four groups underwent nasal and throat screening for S. aureus. Three groups of individuals in the community (n = 2632) with different estimated levels of exposure to the health care system (HCS) were screened, including 1500 healthy blood donors, 498 patients from a school of dental medicine, and 634 health care workers (HCWs) at a trade fair. The fourth group comprised in-hospital patients and HCWs (n = 832) and was considered the group with the highest estimated exposure to the HCS. As a primary outcome, we analyzed risk factors for exclusive throat carriage in exclusive throat carriers vs all nasal carriers. RESULTS: Of 3464 individuals screened, 428 (12.4%) had exclusive throat carriage, and 1260 (36.4%) had carriage in the nares only or in the nares and the throat. The most important independent risk factor for exclusive throat carriage was age 30 years or younger (odds ratio, 1.66; P <.001). Exposure to the HCS was a significant protective factor for exclusive throat carriage (odds ratio, 0.67; P = .001). Healthy blood donors were almost twice as likely to have exclusive throat carriage than in-hospital patients and HCWs (30.2% vs 18.4% of all carriers, P <.001). CONCLUSIONS: Absence of exposure to the HCS and younger age predicted exclusive throat carriers, a population at high risk for community-onset methicillin-resistant S. aureus. Screening for S. aureus should include swabs from the anterior nares and from the throat to improve the likelihood of detecting carriers.
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