Letter to the editor


We read with great interest the article by Murgier et al. [1] on microbial flora on cell-phones in an orthopedic surgery room before and after decontamination, recently published in the Orthopaedics & Traumatology: Surgery & Research. This study confirmed that mobile phones are potentially vehicles for pathogenic bacteria in a hospital setting. Although we agree with the findings and conclusions, we would like to present our results regarding this topic. The prevalence of nosocomial infection in Serbian hospital is similar to the prevalence in the developed countries and surgical site infections are the most prevalent. Moreover, nosocomial infections are most common in urological and orthopedic departments, and then in intensive care units [2].

As the members of team for surveillance of nosocomial infection in a regional teaching hospital Clinical Center, Nis (Nisava District, south east part of Serbia) we pay great attention to implementation and improvement of the measures in prevention and control of nosocomial infection and elimination of known risk factors. This 1553-bed tertiary care teaching hospital, the second largest in the country, treats over 60,000 inpatients and 500,000 outpatients annually. In our previous study carried out in this hospital [3], we found that 71.4% of mobile phones were contaminated with bacteria, and 16.7% of them were with pathogenic bacteria. This high prevalence of microbial agents isolated from mobile phones was attributed to the poor hygienic and sanitary practices.

In 2016, we screened 125 healthcare workers (42 doctors and 83 nurses) entering the operating room of Clinical Center, Nis and samples were taken from their mobile phones. The participants were asked to anonymously fill up a 13-item questionnaire structured according to a similar research [4], regarding patterns of usage, hygiene practices and awareness about the mobile phones contamination. All of the participants reported using their mobile phones when in the hospital. The majority of participants (78.6%) reported systematically answering their phone when in the operating room. Similar to the results of Murgier et al. [1], 39.5% of participants cleaned their mobile phones regularly and only 25% washed their hands after using the phone. Almost all of participants considered their mobile phone to be vector for spread of nosocomial infection from one patient to another, but only 36.3% of them believe that the mobile phones can have very harmful contamination. In total, 57.6% of participants shared mobile phones with colleagues and carried something else with the mobile phones in their pocket (63.6%). Thus, level of knowledge and practice regarding this issue were less than desired and should be improved by staff education.

More than sixty per cent (62.4%) of mobile phones sampled were contaminated. The predominant isolated in our study was Staphylococcus epidermidis, but we also identified nosocomial pathogens like Staphylococcus aureus, Acinetobacter spp. Enterobacter spp and Pseudomonas aeruginosa. Contamination rate with human pathogen bacteria were 13.6%. In the previous study, Jeske et al. [5] found a 10% rate of bacterial contamination with potentially pathogenic bacteria when investigating mobile phones of anesthetists.

Majority mobile phones in our study showed the presence of one type of microorganism, but also three and more bacterial type were found on the mobile phones of 9.6% healthcare workers.

To our knowledge, this is the first study from Balkan countries about microbial flora on mobile phones in the surgery departments. The results are a basis for further research and specific staff education should be done regarding this issue.

Disclosure of interest

The authors declare that they have no competing interest.

References


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