STUDY ON ROLE OF MOBILE PHONES AS AGENT FOR TRANSMISSION OF INFECTIONS IN TERTIARY CARE HOSPITAL

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ABSTRACT

The use of mobile phones inside hospitals especially in clinically sensitive areas is a subject of controversy because it may improve the quality of healthcare but also can transmit healthcare associated infections. To determine the potential role of mobile phones in harbouring microorganisms and to evaluate their role in transmission of microorganisms from the mobile phone to the hand of health care personnel, 40 staff members were enrolled in this study. 87.5% of the samples showed growth of bacterial agents.

KEYWORDS

Mobile Phone, Bacteria, Nosocomial Infection.

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INTRODUCTION

Nosocomial infections increase day by day and such infections cause a significant rate of mortality and morbidity. Today, mobile phones have become one of the indispensable accessories of professional and social life.[1,2] The use of cell phones often occurs in hospitals, by patients, visitors and health care workers, and this is one environment where hospital-associated infection is most prevalent.[3,4] The aetiological agents of hospital infections may spread through the hands of healthcare personnel (HP), thermometers, stethoscopes, and even toys in the paediatric intensive care units of hospitals.[4]

MATERIAL AND METHODS

Samples were collected from the mobile phones of 40 healthcare personals of which 22 were doctors, 9 nurses, 5 residents and 4 interns. The study period was of 1 month. The samples were collected aseptically using cotton swab by rotating the swabs on the keys of the mobile phones. Then they were cultured on blood agar and MacConkey agar and were incubated at 37°C for 24 to 48 hours aerobically. Plates were observed for growth and colonial morphology of the isolates. The isolates were Gram stained and were further tested for the presence of catalase, coagulase, oxidase enzymes and lactose and non-lactose fermentation. Antibiotic pattern of the isolates was also observed.

RESULT

Out of 40 samples, growth was observed in 35 samples. 12 were coagulase negative staphylococci, 9 were staphylococcus aureus, 6 were E. coli, 4 were pseudomonas aeruginosa, 4 were klebsiella. 5 samples showed no growth. Antibiotic pattern showed resistance to all the lower antibiotics, ceftriaxone, amikacin, meropenem, enrofloxacin. Most of them were sensitive to carbapenems, polymyxin, ticarcillin. [Table 1]

Table 1: Bacterial Agents Isolated from the Study

<table>
<thead>
<tr>
<th>Bacteria Isolated</th>
<th>Number Isolated</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coagulase Negative Staphylococci</td>
<td>'12</td>
<td>30</td>
</tr>
<tr>
<td>Staphylococcus Aureus</td>
<td>9</td>
<td>22.5</td>
</tr>
<tr>
<td>E. coli</td>
<td>6</td>
<td>15</td>
</tr>
<tr>
<td>Pseudomonas Aeruginosa</td>
<td>4</td>
<td>10</td>
</tr>
<tr>
<td>Klebsiella</td>
<td>4</td>
<td>10</td>
</tr>
</tbody>
</table>

DISCUSSION

Our study reveals that mobile phones may get contaminated by bacteria (Such as Escherichia coli, Pseudomonas aeruginosa and Klebsiella pneumoniae), which cause hospital infections, and may serve as a vehicle for the spread of nosocomial pathogens. Today’s mobile phones are important equipment for physicians. Hence, infection control precautions such as hand hygiene should be practised and decontamination of mobile phones using disinfectants like alcohol should be done.

REFERENCES


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