that particle counting at regular intervals in an empty theatre would be more logical.

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References

Sir,

**Carriage of Staphylococcus haemolyticus among healthcare workers**

*Staphylococcus haemolyticus* has emerged as a nosocomial pathogen and is commonly reported to cause blood-stream infections.¹ Perdreau-Remington *et al.* reported hand carriage to be an important mode of transmission because *S. haemolyticus* was recovered from the hands of 14 out of 15 healthcare workers in a ward with no evident endemic infections.² However, this cross-sectional investigation was limited by the small number of healthcare workers studied.

At our 950-bed tertiary-care university hospital we have recently experienced an outbreak of blood-stream infections with *S. haemolyticus* which involved nine patients receiving treatment for haematological malignancies. Genotyping by random amplification of polymorphic DNA-polymerase chain reaction of these isolates showed that among a total of five genotypes, the outbreak strain was present in four patients. At the time the outbreak of infection became apparent, we looked for permanently colonized healthcare workers. One hundred and twenty healthcare workers, including nurses, aides, physicians, trainees and ancillary personnel, were screened for the presence of *S. haemolyticus*. Each healthcare worker was cultured two or three times and specimens were obtained from hands, axilla and anterior
Table I. Results of screening of 120 healthcare workers for Staphylococcus haemolyticus during an outbreak of infection and locations of isolation

<table>
<thead>
<tr>
<th>Culture location</th>
<th>Physicians (N=19)</th>
<th>Nurses (N=73)</th>
<th>Others (N=28)</th>
<th>Total (N=120)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hand</td>
<td>1 (5%)</td>
<td>10 (14%)</td>
<td>4 (14%)</td>
<td>15 (13%)</td>
</tr>
<tr>
<td>Axilla</td>
<td>1 (5%)</td>
<td>1 (1%)</td>
<td>0 (0%)</td>
<td>2 (2%)</td>
</tr>
<tr>
<td>Anterior nares</td>
<td>0 (0%)</td>
<td>4 (5%)</td>
<td>0 (0%)</td>
<td>4 (3%)</td>
</tr>
</tbody>
</table>

The results of screening and the locations of isolation are noted in Table 1.

In comparison with previous reports, the overall prevalence of hand-carriage of *S. haemolyticus* was low, even though the sampling took place during an outbreak of infection. The highest prevalence of *S. haemolyticus* carriage was found on the hands of the nurses. Five healthcare workers were found to be permanently colonized with *S. haemolyticus*, and de-colonization was achieved by the application of mupirocin in the anterior nares and by frequent washing of the skin using chlorhexidine soap. The outbreak of *S. haemolyticus* infection was controlled by reinforcement of hand disinfection.

In conclusion, the prevalence of hand-carriage of *S. haemolyticus* in different hospitals shows great variation. Certainly, the hands are the main reservoir for the transmission of this species, a conclusion which is supported by the effect of hand disinfection as a control measure. Further studies are needed to gain more insight in the epidemiology and modes of transmission of this micro-organism.

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