designed to adapt to the anatomical structure of right bronchi and, thus, seems especially suitable.

The letter by Dr Dahlqvist and colleagues is the first report, to our knowledge, to suggest the usefulness of the Oki stent for the treatment of airway stenosis after lung transplantation in clinical practice. We hope that further studies or reports will reinforce their findings.

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Sensitivity of Blood Culture vs Polymerase Chain Reaction for Skin Contaminants in Specimen Retrieved via the Distal Lumen of Seldinger-Guided Central Venous Catheters

To the Editor:

We read with great interest the article by Levin et al1 published in an issue of CHEST (March 2013). The authors report that blood cultures obtained via the wire hub of a central venous catheter (CVC) were positive for contaminants four times more often than blood cultures taken from the nonwire hub. It was concluded that the wire might be contaminated due to manipulation in the not completely sterile subcutaneous tissue.

We would like to confirm the report by Levin et al1 with an observation that has confirmed a study where we intended to investigate whether cardiopulmonary bypass for coronary artery bypass grafting is associated with a significant bacteremia or DNAemia. We studied 41 patients with on-pump coronary artery bypass grafting and 11 patients with off-pump coronary artery bypass, where we obtained blood cultures and ethylenediaminetetraacetic acid (EDTA) blood after induction of general anesthesia from the wire hub of the freshly inserted CVC. A consecutive blood sample was taken postoperatively immediately after admission to the ICU by sterile venous puncture. Presence of microbial DNA in the EDTA blood was measured by real-time polymerase chain reaction (PCR) with the Light Cycler System 2.0 (Roche Diagnostics) using the SeptiFast multiplex primer set. The patients gave written consent; the study was approved by the local ethics committee.

Before surgery, 34 of the blood cultures taken from the wire hub (61.8%) were positive and mostly revealed skin contaminants (Table 1). Interestingly, only two of the preoperative PCRs concomitantly taken with the blood culture were positive. After admission to the ICU, only one blood culture was positive.

Blood cultures drawn from a CVC are prone to a higher proportion of false-positive results when compared with fresh venipuncture.2 However, such studies addressed CVCs several days after insertion. As in the study by Levin et al1 we have obtained blood from a CVC just inserted under conditions of maximum barrier precaution by the Seldinger technique.

Table 1—Bacteria Identified

<table>
<thead>
<tr>
<th>Blood Culture</th>
<th>PCR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before surgery</td>
<td></td>
</tr>
<tr>
<td>8 Propionibacterium</td>
<td>2 Staphylococcus aureus</td>
</tr>
<tr>
<td>4 Corynebacterium renale</td>
<td></td>
</tr>
<tr>
<td>2 Staphylococcus capitis</td>
<td></td>
</tr>
<tr>
<td>2 Staphylococcus saprophyticus</td>
<td></td>
</tr>
<tr>
<td>2 Veillonella species</td>
<td></td>
</tr>
<tr>
<td>1 Enterococcus faecium</td>
<td></td>
</tr>
<tr>
<td>1 Peptostreptococcus</td>
<td></td>
</tr>
<tr>
<td>1 Staphylococcus auricularis</td>
<td></td>
</tr>
<tr>
<td>1 Staphylococcus hominis</td>
<td></td>
</tr>
<tr>
<td>1 Staphylococcus kloosii</td>
<td></td>
</tr>
<tr>
<td>1 Staphylococcus warneri</td>
<td></td>
</tr>
<tr>
<td>1 Streptococcus oralis</td>
<td></td>
</tr>
<tr>
<td>2 S. aureus</td>
<td></td>
</tr>
<tr>
<td>On ICU admission</td>
<td></td>
</tr>
<tr>
<td>Bacillus cereus</td>
<td>Enterobacter</td>
</tr>
</tbody>
</table>

Bacteria identified by blood culture vs DNA amplification in concomitant EDTA blood samples subjected to PCR. EDTA = ethylenediaminetetraacetic acid; PCR = polymerase chain reaction.
Correspondence to: Phillip D. Levin, MBBChir, Department of Anesthesiology and Critical Care Medicine, POB 12000, Jerusalem 91120, Israel; e-mail: philip@hadassah.org.il © 2014 American College of Chest Physicians. Reproduction of this article is prohibited without written permission from the American College of Chest Physicians. See online for more details. DOI: 10.1378/chest.13-2665

REFERENCES


Physiotherapy in Patients in the ICU Treated With IV Tissue Plasminogen Activator for Stroke

To the Editor:

We read with interest the recent article in CHEST (September 2013) by Stiller,1 who provided a systematic review of the literature on physiotherapy in the ICU. The author concluded that early patient mobilization should be a priority in adult ICUs. We agree with this practice and suggest that it is beneficial for most critically ill patients, even in patients not receiving mechanical ventilation. Although not a primary focus of this review, we found little mention of patients in the neuro-ICU, with the exception of intracranial pressure monitoring in neurosurgery patients as seen in Table 3 of the article.1 Between June 2011 and July 2012, we performed mobilization in 30 patients in the ICU within 13 to 24 h of receiving IV recombinant tissue plasminogen activator for acute ischemic stroke at the Mayo Clinic in Florida.2 We tracked the safety of early physiotherapy and found that 67% of the patients had no complications related to mobilization. Moreover, 87% of mobilization activities (ie, sitting, standing, walking, transferring to chair) were tolerated, with no adverse response. Safety was measured by neurologic and hemodynamic monitoring. No patient experienced sustained neurologic deficit or bleeding from any invasive line (eg, venous line, arterial line, or Foley catheter).

The potential for earlier initiation of rehabilitative therapies in the neuro-ICU to reduce length of stay may facilitate a more rapid turnover of the patient population and, thus, may enable critical care clinicians to serve a larger number of patients. We believe this is an important consideration given the aging of the population, the mounting shortage of critical care providers, and the growing burden of neurologic diseases that ICU clinicians will face by 2025.1,3 Early mobilization of patients may have significant financial implications in light of imminent cost-cutting initiatives in US health care.3

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Response

To the Editor:

We thank Dr Bloos and colleagues for sharing their results with us, and we are pleased to receive further validation of our recently published results.1 Regarding the discrepancy between blood culture and polymerase chain reaction results, we suggest an alternative explanation relating to the order in which the tests were taken. If the blood was drawn for culture prior to the blood for polymerase chain reaction, this may have “washed out” the wire taken. If the blood was drawn for culture prior to the blood for culture and polymerase chain reaction results, we suggest an alteration in the order in which the tests were performed.2,3

References


References