We describe the first reported case of endocarditis due to *Neisseria skkuensis*. The organism from the blood cultures taken on admission day was identified initially as unidentified Gram-negative cocci by Vitek2. Finally, it was identified as *Neisseria skkuensis* by 16 rRNA gene sequence analysis.

### CASE REPORT

A 41-year-old man was admitted to our hospital with a 1-week history of febrile sense, chills, sweating, aggravation of dyspnea, and hypotension during hemodialysis. He had a complicated history, including liver cirrhosis caused by chronic hepatitis B infection and chronic kidney disease due to glomerulonephritis. He had received entecavir since 2009 and hemodialysis since 2000. In addition to these, he had undergone a mechanical mitral valve replacement due to infective endocarditis caused by methicillin-resistant *Staphylococcus aureus* more than 1 year ago. He denied having had dental treatment or drug abuse since mitral valve replacement.

On arrival at the emergency department, the patient’s vital signs were as follows: blood pressure, 86/52 mm Hg; respiratory rate, 22 breaths per min; and temperature, 37°C. Physical examination revealed metallic heart sounds without murmur and no abdominal tenderness with positive shifting dullness. A chest radiography showed cardiomegaly and pulmonary edema. Laboratory investigations revealed a C-reactive protein concentration of 22 mm/h (N, <0.3 mg/dl), an erythrocyte sedimentation rate of 37 mm/h (N, <22 mm/h), and a procalcitonin concentration of 152.2 ng/ml. The white blood cell (WBC) count was 9,850/mm³ with dominant segmented neutrophils (85%), hemoglobin (Hb) at 7.5 g/dl, platelet count of 57,000/mm³, blood urea nitrogen at 49.5 mg/dl, creatinine at 6.55 mg/dl (N, <1.3 mg/dl), and total bilirubin at 1.2 mg/dl (N, <1.5 mg/dl). He was coagulopathic with a prothrombin time of 23.1 s (N, 12.4 to 14.9), international normalized ratio (INR) of 2.0, activated partial thromboplastin time (APTT) of 72.7 s (N, 29.1 to 41.9), and D-dimer of 3.42 μg/ml (N, 0 to 0.5). Ascites analysis showed a WBC count of 310/mm³, with 39% neutrophils, an albumin level of 1.3 g/dl, and D-dimer of 3.42 μg/ml (N, <0.5). The patient was treated for prosthetic valve endocarditis with intravenous vancomycin at 1g every 3 days, piperacillin-tazobactam at 2.25 g four times daily, gentamicin at 100 mg daily, and oral rifampin at 900 mg daily. On hospital day four, the patient re-

### Received

12 March 2012  Returned for modification  9 April 2012
Accepted  30 May 2012
Published ahead of print  6 June 2012
Address correspondence to Kyong Ran Peck, krpeck@skku.edu.
Copyright © 2012, American Society for Microbiology. All Rights Reserved.

doi:10.1128/JCM.00676-12
The genus *Neisseria* includes a group of closely related Gram-negative bacteria that are primarily commensal inhabitants of the mucus membrane of mammals. Within the group, 15 species are of human origin and only *Neisseria meningitidis* and the mucus membrane of mammals. Within the group, 15 species are negative bacteria that are primarily commensal inhabitants of the

### TABLE 1

<table>
<thead>
<tr>
<th>Rank</th>
<th>Name</th>
<th>Authors</th>
<th>Strain</th>
<th>Accession no.</th>
<th>Pairwise similarity (%)</th>
<th>No. of different nucleotides/total nucleotides</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td><em>Neisseria skkuensis</em></td>
<td>Lee et al. 2010</td>
<td>SMC-A9199(^4)</td>
<td>FJ763637</td>
<td>100</td>
<td>0/1,406</td>
</tr>
<tr>
<td>2</td>
<td><em>Neisseria animalis</em></td>
<td>Berger 1960</td>
<td>NCTC 10212(^2)</td>
<td>AJ239388</td>
<td>97.491</td>
<td>34/1,355</td>
</tr>
<tr>
<td>3</td>
<td><em>Neisseria cinerea</em></td>
<td>Von Lingelsheim 1906, Murray 1939</td>
<td>ATCC 14685(^3)</td>
<td>ACDY02000019</td>
<td>97.021</td>
<td>42/1,410</td>
</tr>
<tr>
<td>4</td>
<td><em>Neisseria subflava</em></td>
<td>Flugge 1886, Trevisan 1889</td>
<td>U37(^7)</td>
<td>AJ239291</td>
<td>96.753</td>
<td>44/1,355</td>
</tr>
<tr>
<td>5</td>
<td><em>Neisseria meningitidis</em></td>
<td>Albrecht and Ghon 1901, Murray 1929</td>
<td>MC58</td>
<td>AE002098</td>
<td>96.738</td>
<td>46/1,410</td>
</tr>
</tbody>
</table>

August 2012 Volume 50 Number 8 jcm.asm.org

FIG 1 Transesophageal echocardiogram (0.84 cm by 0.61 cm and 0.42 by 0.3 cm) showing mobile vegetations (arrow) on the prosthetic mitral valve strut.
ACKNOWLEDGMENT

We have no conflict of interest to disclose.

REFERENCES


FIG 2 PFGE analysis of genomic DNA from N. skkuensis strains digested with NheI and SpeI. N. skkuensis strains digested with NheI (A) or SpeI (B) are shown. Two isolates showed <85% similarity. The isolates were considered to be unrelated to each other. N. skkuensis 1 is SMC-A9199 (7). N. skkuensis 2 is the isolate from this case patient.