We have read with great interest the article by Ben-Ami et al. (2) about the misidentification of coagulase-negative staphylococci (CoNS) as Kocuria spp. by the Vitek 2 system (bioMérieux, Marcy l’Etoile, France). They warned that a clinical specimen growing Kocuria should raise suspicion of CoNS infection. In their study, they made use of the Vitek 2 ID GPC gram-positive identification card. In our laboratory, we had similar experiences with the use of this card. However, a new Vitek 2 gram-positive identification card GP and database were recently introduced by bioMérieux. This GP card allows for the identification of additional taxa. The species Kocuria kristinae is one of these. Funke et al. (3) recently reported in this journal the performance of this new GP card for the identification of gram-positive cocci from clinical specimens. Although they reported that the GP card performed well in a routine clinical laboratory, they warned that their evaluation covered only the most frequently encountered gram-positive cocci and that additional evaluation of rare taxa is recommended.

Recently, we have encountered two isolates from two patients that were identified as Kocuria kristinae by the Vitek 2 GP card. The first isolate came from the aortofemoral vascular graft of a 78-year-old man. The graft was cultured in Wilkins-Chalgren broth and yielded growth of gram-positive cocci after 7 days of incubation. The second isolate came from pericardial fluid of a 61-year-old man. It was cultured in a BacT/ALERT PF bottle (bioMérieux) and yielded growth after 2 days of incubation. The identifications were confirmed on the basis of the following manual tests: facultative anaerobe, nonmotile, catalase-positive, gram-positive cocci arranged in tetrads on Gram staining and pale cream nonhemolytic colonies on blood agar, negative nitrate reduction, positive esculin hydrolysis, anaerobic acid from glucose, bacitracin susceptibility at 0.04 U, and furazolidone resistance at 100 μg. Analysis of the cellular fatty acid composition revealed that the two isolates had large amounts of anteiso-C15:0 and smaller amounts of C16:0 iso-C16:0, and anteiso-C17:0, which is compatible with Kocuria kristinae (4). Analysis of the 16S rRNA sequences was performed as described previously by Wauters et al. (5), and he confirmed the identification of the two isolates.

In both cases, the isolates probably reflected contamination, since both patients were doing well in the absence of antimicrobial therapy. Kocuria kristinae is part of the flora of the skin and oral cavity. Infection due to Kocuria spp. is exceedingly rare. Infection due to Kocuria kristinae has only been reported once in an ovarian cancer patient with catheter-related bacteremia (1).

We believe that these cases illustrate that with use of the Vitek 2 GP card a reliable identification of Kocuria kristinae is possible. Also, use of this card in the routine microbiology laboratory could lead to a better understanding of the potential pathogenicity of this species.

We are grateful to G. Wauters for performing the 16S rRNA gene sequencing.

Authors’ Reply

We thank Boudewijns et al. for their contribution. Their rigorous evaluation of two strains from clinical specimens shows conclusively that these isolates were correctly identified as Kocuria kristinae by the Vitek 2 system with the new GP card and database. It remains to be determined, however, whether the new GP system will reduce the number of coagulase-negative staphylococci falsely identified as Kocuria spp. A rough indication that the current test is not only sensitive but also specific for Kocuria spp. is the total number of isolates identified as Kocuria at a certain laboratory. Given the rarity of Kocuria spp. as human pathogens, one would expect an increase in the specificity of the test to result in a substantial drop in the number of Kocuria isolates identified. At our microbiology laboratory, isolates from 21 patients that were identified as Kocuria spp. by the Vitek 2 system during the 6-month period of March through August 2004. In the corresponding period of 2005, during which the new GP card was implemented, isolates from only 6 patients were identified as Kocuria spp., suggesting an improvement in the specificity of the Vitek 2 system.

The positive predictive value of the GP card is dependent on the prevalence of true Kocuria isolates in the tested population. Since such isolates are apparently rare, we maintain that identification of Kocuria spp. by any array of phenotypic tests is suspect and requires confirmation by genomic assays.

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REFERENCES


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