[LETTERS TO THE EDITOR]

The Authors' Reply to "Additional Bacteriological Examinations Might be Required for the Correct Identification of *Staphylococcus warneri*"

Key words: *Staphylococcus warneri*, *Staphylococcus pasteurii*, matrix-assisted laser desorption ionization time-of-flight mass spectrometry (MALDI-TOF MS), infective endocarditis

(Intern Med 60: 823, 2021)

(DOI: 10.2169/internalmedicine.6014-20)

The Authors Reply We thank Dr. Fukuchi and Dr. Sugawara for their interests in our article (1). They raised a very important question about the pathogen of our case, as *Staphylococcus pasteurii* is phenotypically similar to *S. warneri* and is, therefore, frequently misidentified as *S. warneri* when examined with biochemical procedures (2).

In our case, however, we utilized matrix-assisted laser desorption ionization time-of-flight mass spectrometry (MALDI-TOF MS) to identify the pathogenic bacteria and detected *S. warneri* as the causative pathogen of this case of native valve endocarditis. MALDI-TOF MS is a rapid, accurate and cost-effective method for microbial identification in clinical laboratories (3). It also allows for the accurate identification of most Gram-positive and Gram-negative bacterial strains at the species level (3). While 16S rRNA sequencing is useful for the identification and taxonomic classification of bacterial species, MALDI-TOF MS reportedly distinguishes *S. warneri* and *S. pasteurii* (4, 5).

Therefore, we concluded that *S. warneri* was the pathogen of our case and that the asymptomatic and chronic clinical course is a feature of infective endocarditis due to *S. warneri*. The accumulation of more case reports will help clarify the clinical features of *S. warneri* infectious diseases.

The authors state that they have no Conflict of Interest (COI).

Junpei Yamamoto and Hideki Katagiri

References

1. Yamamoto J, Endo A, Sugawara H, et al. Native valve endocarditis due to *Staphylococcus warneri* developing in a patient with type 1 diabetes. Intern Med **59**: 2269-2274, 2020.
2. Ramnarain J, Yoon J, Runnegar N. *Staphylococcus pasteurii* infective endocarditis: a case report. IDCases **18**: e00656, 2019.
3. Croxatto A, Prod'homme G, Greub G. Applications of MALDI-TOF mass spectrometry in clinical diagnostic microbiology. FEMS Microbiol Rev **36**: 380-407, 2012.
4. Loonen AJ, Jansz AR, Berglund JN, Valkenburg M, Wolffs PF, van den Brule AJ. Comparative study using phenotypic, genotypic, and proteomics methods for identification of coagulase-negative staphylococci. J Clin Microbiol **50**: 1437-1439, 2012.
5. Ayeni FA, Andersen C, Nørskov-Lauritsen N. Comparison of growth on mannitol salt agar, matrix-assisted laser desorption/ionization time-of-flight mass spectrometry, VITEK® 2 with partial sequencing of 16S rRNA gene for identification of coagulase-negative staphylococci. Microb Pathog **105**: 255-259, 2017.

The Internal Medicine is an Open Access journal distributed under the Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License. To view the details of this license, please visit (<https://creativecommons.org/licenses/by-nc-nd/4.0/>).