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ACUTE BACTERIAL ENDOCARDITIS DURING GRANULOCYTOPENIA IN AN ALLOGENIC MARROW TRANSPLANT RECIPIENT

To the Editor:

Although granulocytopenia resulting from chemotherapy predisposes patients to a wide variety of infectious complications, endocarditis has seldom been described (1). We report a case of bacterial endocarditis on a native valve after allogenic marrow transplantation with subsequent neutropenia.

A 53-year-old man underwent an allogenic marrow transplant from an HLA-matched, unrelated donor as treatment for myelodysplastic syndrome (FAB subtype refractory anemia with excess blasts in transforma-tion). Pretransplant cytoreduction consisted of hyperfractionated whole-body radiotherapy (1,350 cGy) and cyclophosphamide (120 mg/kg). Graft-versus-host disease prophylaxis consisted of intravenous cyclosporine (1.5 mg/kg twice daily) and methotrexate (15 mg/m^2 on day 1 and 10 mg/m^2 on days 3 and 6 posttransplantation).

Five days posttransplant, the patient developed severe oral pain and gingival bleeding. Three days later he had a new fever (39.6°C), accompanied by rigors. On examination, he appeared ill, with extensive hemorrhagic buccal mucositis. The left subclavicular fossa was erythematous, tender, and indurated along the subcutaneous course of the central venous catheter tract. His absolute neutrophil count was 0.0 cells/mm^3, the hemoglobin was 9.1 g/dL, and the platelet count 13,000 cells/μL. Serum aminotransferase and creatinine levels and a chest radiograph were normal.

Intravenous ticarcillin-clavulanic acid (3 g every 4 hours), gentamicin (5 mg/kg daily), and vancomycin (1 g every 12 hours) were instituted. The fever resolved within 48 hours. On day 12 after transplantation, blood cultures from all central venous catheter ports grew a gram-negative bacteria (from anaerobic cultures at 70 hours and from aerobic cultures at 88 hours). *Haemophilus parainfluenzae* was isolated. Transthoracic and transesophageal echocardiography for evaluation of a new pansystolic murmur showed a single 8-mm vegetation on an otherwise normal aortic valve.

The patient continued to improve and all subsequent blood cultures were sterile. The neutropenia resolved 21 days after transplantation. The left central venous catheter tract infection improved. Broad-spectrum antibiotics were changed to intravenous ceftriaxone (2 g daily), and he was discharged home to complete 6 weeks of therapy. There was no evidence of relapse at 6-month follow-up.

Endovascular infections associated with *Haemophilus* species are uncommon and account for about 1% of all cases of infectious endocarditis (2–4). *Haemophilus* species associated with endocarditis include *H. influenzae, H. parainfluenzae, H. aphorpholus*, and *H. paraphropholus*. The latter three organisms, in the context of current understanding of endocarditis, are grouped as "HACEK" organisms (*Haemophilus, Actinobacillus, Cardiobacterium, Eikenella*, and *Kingella*) because of their common clinical and microbiologic features: slow-growing, fastidious bacteria; large vegetations; and frequent embolic occlusion of medium-sized and even large arteries. The primary sources of bacteremia associated with *Haemophilus* species endovascular infection include dental procedures, upper respiratory tract infections, and pneumonia (3–7).

Although neutrophils are not an essential component of valvular vegetations, bacterial endocarditis is rarely encountered in granulocytopenic subjects, even in those with persistent bacteremia due to *Streptococcus, Staphylococcus,* or *Enterococcus* species. We suspect that severe mucositis in our patient was the portal of entry for the *H. parainfluenzae* blood stream infection. Secondary infection of the central venous catheter tract might have led to high-grade bacteremia, promoting endocarditis; however, we were able to "treat through" the tunnel infection without removal of the catheter.

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PATIENT CENTEREDNESS IN MEDICAL ENCOUNTERS REQUIRING AN INTERPRETER

To the Editor:

I agree with Rivadeneyra and colleagues (1) that Spanish-speaking patients are often at a disadvantage in encounters with English-speaking physicians. It is encouraging to see research on this important topic. However, I would like to make two points about their interpretation of the study's findings.

First, culture could have affected the reduced number of patient offers by Spanish-speaking patients. The authors state they addressed this issue by comparing English-speaking Latinos with Spanish-speaking Latinos, but this method does not fully address possible confounding by culture. In many settings, language and acculturation are correlated; indeed, language is often used in measures of acculturation (2–6). English-speaking Latinos may have made as many offers as English-speaking non-Latinos because they were more acculturated, not because they did not face the language barrier of communicating through an interpreter.

Second, the type of interpreters used in the encounters could have biased the results of the study. The authors do not state how the bilingual nurses in this study were trained or staffed to function as interpreters. Given that they are nurses, it is possible that they are fluent in medical terms in both English and Spanish, but this does not ensure that they meet professional interpreter standards. Professional interpreters are taught to interpret accurately (conveying the content of what is said, which may not be conveyed in word-for-word interpretation), completely (conveying everything that is said), and in a manner that conveys cultural frameworks (7). The interpreted encounters in this study could have been less patient-centered because the bilingual nurses were not taught these concepts and they did not convey accurate, complete, or relevant cultural information that might have prompted more exploratory responses on the part of the physician. It is also not clear whether the bilingual nurses were fully dedicated interpreters or were responsible for additional duties. Bilingual staff who are pulled to interpret have competing responsibilities that may reduce the quality of an encounter because they simplify language or rush the encounter so as to return to their other tasks.

Despite these comments, the article by Rivadeneyra and colleagues and the accompanying editorial (8) highlight the importance of language in the health care encounter and the need for more research on the communication needs of patients who speak limited English.

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Editor's note: The authors were offered a chance to respond, but they did not.

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