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Commentary

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Comment on: A Case of Infective Endocarditis Due to Herbaspirillum Huttiense in a Pediatric Oncology Patient

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Introduction

Infective Endocarditis Due to *H. Huttiense*

We are writing this short commentary on the case of infective endocarditis after resistant fever and recurrent reproduction of Herbaspirillum Huttiense in blood cultures in an oncology patient we were following in the pediatric oncology clinic of Ankara City Hospital [1].

Herbaspirillum Huttiense is a gram-negative, oxidase-positive opportunistic pathogen that belongs to the betapreoteobacteria family. It has been isolated from food such as rice, sugarcane, drinking water distribution system [2]. Through developing microbiology laboratories, it has started to be seen with an increasing frequency, especially in immunocompromised patients.

Infective endocarditis (IE), although rare in children, most frequently seen in congenital and rheumatic heart disease. In children with cancer, it is associated with central venous catheter infections and detection and treatment of IE is important because of its significant morbidity and mortality. The estimated annual incidence of pediatric IE in the United States ranges from 3.3 per 100,000 per year in infants <1 year old to 0.3 to 0.8 per 100,000 per year in older children and adolescents [3-4]. Common causative agents for IE in children are *Streptococcus viridans, Staphylococcus aureus, and enterococci.* Gram-negative bacilli like *Haemophilus species, Cardiobacterium, Eikenella* and *Kingella* species are responsible for 8% of IE in children [4]. Among Gram-negative bacilli, *H. huttiense* is not reported as the cause of IE, to date.

An 11-year-old female patient, who was followed up for osteosarcoma originating from the right distal tibia, was admitted to our hospital to receive routine chemotherapy. While receiving chemotherapy, on the 3rd day of her hospitalization, she had a fever reaching 39 degrees. Routine tests and cultures of blood were taken. When it was observed that she was neutropenic in her examinations, treatment of neutropenic fever was started and there was no obvious focus of fever.

Repeated blood cultures were sampled. *H. huttiense* reproduced in both peripheral blood and catheter cultures, on three different days Antibiotherapy of the patient was arranged according to the antibiotic susceptibility test. Transthoracic echocardiography was performed because of prolonged fever and recurrent culture growths. Vegetation was observed at the junction of the inferior vena cava and the right atrium. According to recurrent culture positivity of blood cultures with the same agent on different days and vegetation on the endocardium, the patient was diagnosed as IE according to Modified Duke Criteria. The treatment of the patient whose fever regressed under appropriate antibiotic therapy was arranged to include IE.

What is the peculiarity of this case? Immunocompromised patients are susceptible to infection with pathogens that do not cause disease in the normal population. Some of these pathogens are newly identified in modern microbiology laboratories. It is sometimes difficult to predict which of these pathogens can cause infective endocarditis. If you work with experienced cardiology, microbiology, and infection clinic, you may have the chance to intervene in these cases early. In this case, it has been shown for the first time in the literature that *H.huttiense* may be the causative agent of infective endocarditis.

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