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OLGU SUNUMU / CASE REPORT

Abiotrophia Defectiva Endocarditis Related to Mitral Valve Prolapse: A Case Report

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ABSTRACT

Abiotrophia defectiva is a very rare and important cause of culture-negative infective endocarditis and may cause insidious clinical progression. Clinicians should be aware of this bacterium when dealing with blood culture-negative endocarditis especially in patients with predisposing factor such as mitral valve prolapse.

Keywords: Abiotrophia defectiva, infective endocarditis, mitral valve prolapse

MİTRAL KAPAK PROLAPSUSU İLE İLİŞKİLİ ABİOTROPHİA DEFECTİVA ENDOKARDİTİ: OLGU SUNUMU

ÖZET

Abiotrophia defectiva, kültür negatif çıkan enfektif endokardit vakalarının nadir ancak önemli bir sebebidir. Kliniği sinsi bir ilerleme ile seyreden bu bakterinin sebep olduğu kültür negatif enfektif endokardit vakalarında klinisyenler dikkatli olmalıdır. Üstelik mitral kapak prolapsusu gibi predispozan faktörü olan hastalara daha yakın takip gerekmektedir.

Anahtar sözcükler: Abiotrophia defectiva, enfektif endokardit, mitral kapak prolapsusu

Abiotrophia defectiva is a member of the normal oral flora but a rare and important cause of culture-negative infective endocarditis (IE). Previously it was defined as a subgroup of nutritionally variant streptococci, then new genus was defined and called as Abiotrophia, which has only one species: Abiotrophia defectiva (1). Mitral valve prolapse patients with ≥moderate mitral regurgitation or a flail leaflet are at a notable risk of developing endocarditis as compared to those without mitral regurgitation (2). Here in this report, we presented a patient with mitral valve prolapse and progress to Abiotrophia defective IE.

Case Report

A 38-year old female patient was admitted to the hospital with complaints of dyspnea, fatigue, vision disturbance and fever. She had a diagnosis of mitral valve prolapse with moderate mitral insufficiency and under follow up for 5 years. In her physical examination, there was a pansystolic apical murmur. No peripheral findings were found for infective endocarditis. Transthoracic and transesophageal echocardiography revealed bileaflet mitral valve prolapse, a vegetation like mass (25×17 mm)

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at both leaflets of the mitral valve and severe mitral regurgitation (Figure 1). Surgical intervention was planned related to symptoms of the patient, mobile vegetation and severe mitral valve insufficiency. Blood culture analysis revealed Abiotrophia defectiva and an antibiotic treatment with gentamycin (50 mg/kg) and ampicillin/sulbactam (6x2000 mg) was initiated. At the operation, the vegetation was located at the atrial side of the mitral valve and attached on both leaflets. As both leaflets and subvalvular apparatus were heavily affected, a valve-sparing surgery was not feasible. The mitral valve was resected

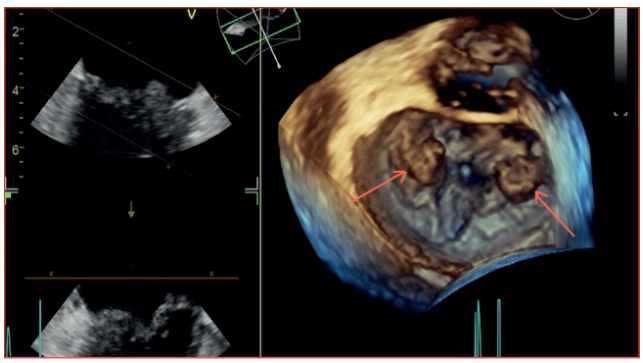

Figure 1. 3D transesophageal echocardiography shows vegetation like mass at the both leaflets of mitral valve.

and annular tissue was irrigated with saline and an antibiotic (Vancomycin). The native valve was replaced with a mechanical prosthetic valve (29 mm St. Jude Medical Inc., USA). Histopathological exam of the leaflets revealed an inflammatory process with neutrophilic and macrophage giant cells predominance. The postoperative period was uneventful and the patient was discharged from the hospital in a good condition on the 6th day after the operation. She had an antibiotic treatment with gentamycin and ampicillin/sulbactam for 6 weeks. The patient is under follow up at the outpatient clinic in a good condition for 6 months.

Discussion

The present report highlights Abiotrophia defectiva which is a very rare pathogen of mitral valve destruction and causing severe regurgitation in a patient with mitral valve prolapse. In a recent study, the incidence of infective endocarditis in patients with mitral valve prolapse was found to be approximately 8 times higher compared to the general population (2). However, according to ACC/AHA guidelines for infective endocarditis in patients with mitral valve prolapse, antibiotic prophylaxis is no longer indicated (3).

Abiotrophia defectiva has important complications such as; heart failure, arrhythmia, septic embolization and destruction of the valve despite the use of appropriate antibiotics (4). Aggressive treatment is necessary including surgery with the first sign of complications (5). Early surgery may prevent severe complications and ease the control of the infection. Abiotrophia defectiva is very sensitive to vancomycin, ceftriaxone, and aminoglycosides; however, 90% of the isolates are resistant to penicillin (1). Our patient was treated with an early valve replacement and antibiotic treatment with penicillin and gentamycin for 6 weeks as The American Heart Association guidelines recommended (3).

Abiotrophia defectiva exists in the normal oral and intestinal tract flora. Our patient had no history of dental intervention and no specific portal of entry was confirmed. However, even tooth brushing is known to cause bacteremia, which could potentially lead to the development of infective endocarditis (6).

As a conclusion, infective endocarditis caused by Abiotrophia defectiva is extremely rare. This pathogen is difficult to isolate and may cause insidious clinical progression. Clinicians should be aware of this bacterium when dealing with blood culture-negative infective endocarditis especially in patients with predisposing factors such as mitral valve prolapse.

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