

SHORT REPORT

Haemophilus Parainfluenzae Endocarditis

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The *Haemophilus* species are rare causative agents of endocarditis. The incidence of *Haemophilus* spp. causing endocarditis has been estimated to be approximately 0.8-1.3% of adult cases (1). We report a rare case of endocarditis due to *Haemophilus parainfluenzae*, with the complications of myocardial abscesses and rupture of the aortic valve leaflet.

Case Report

A 26-year-old woman with a 45-day history of weakness, malaise, fever and chills was admitted to the hospital. She had no underlying disease. On admission, her axillar temperature was 39.5 °C, blood pressure 110/60 mmHg, and pulse rate 110/min. Subconjunctival hemorrhages and a pale skin were present. A III/VI degree systolic murmur was heard at the apex. Splinter hemorrhage was present on the fourth fingernail of the left hand.

Laboratory data on admission revealed a hemoglobin level of 9.2 mg/dl, a white cell count of 23,900/mm³ and a platelet count of 299,000/mm³. The erythrocyte sedimentation rate and C-reactive protein was 140 mm/h and 73 mg/dl, respectively. Serum albumin was 2.6 g/dl and the other chemical constituents of her blood were normal. Chest roentgenogram was normal, and electrocardiogram showed only sinus tachycardia. Transthoracic echocardiography revealed noncoroner leaflet prolapsus of the aortic valve and vegetations on the other leaflets. Moderate aortic insufficiency (2 to 3+) with a 30 mmHg gradient, fibrotic stenosis of the mitral

valve and moderate mitral insufficiency (2 to 3+) were also established (Figure). With these findings, infective endocarditis was diagnosed and antibiotic therapy was begun with cefazolin (6 g/day) and gentamicin (240 mg/day). On the second day, *H. parainfluenzae* was isolated from blood cultures and the therapy was changed to ceftriaxone. On the seventh day of therapy, control blood cultures were negative. In the second week of therapy, respiratory distress developed and an x-ray of the chest revealed diffuse bilateral pulmonary infiltrates. The preliminary diagnosis of pulmonary thromboembolism was ruled out after viewing the results of ventilation-perfusion scanning. A repeated transthoracic echocardiogram did not reveal a decrease in the size of the vegetation. She was unresponsive to medical treatment for congestive heart failure and so she underwent aortic valve resection and replacement. During surgery, large vegetations and laceration were seen on the left and right leaflets of the aortic valve and myocardial abscesses were also observed. No complications occurred in the postoperative period. Intravenous ceftriaxone was given for 6 weeks and the patient was discharged. Oral ciprofloxacin was given for 2 weeks after discharge. After cessation of antibiotic therapy, the patient was followed up for 1 year. The patient was well and a check-up revealed that transthoracic echocardiogram and blood cultures were negative.

H. parainfluenzae is the most common cause of hemophilus endocarditis. The onset of *H. parainfluenzae* endocarditis is usually subacute and the mean duration of



Figure. Echocardiogram revealing noncoronary leaflet prolapsus of aortic valve and vegetation on the other leaflets.

symptoms is often 2-4 weeks (1,2). The clinical presentation in this case was also subacute and the patient's complaints had lasted for 45 days. Dental diseases and oral cavity manipulations have been identified as risk factors predisposing the patient to the development of *H. parainfluenzae* endocarditis. In addition, patients usually have an underlying valve disease (1,2). Our patient had good dental hygiene and did not have any underlying disease.

High rates of complications, including large vegetations, septic emboli, persistent fever and persistent bacteremia, have been noted (1,3-5). In this case, the patient underwent surgery because of congestive heart failure refractory to medical treatment and absence of a decrease in vegetation size.

Although rates for mortality *H. parainfluenzae* endocarditis had been reported to be 10-35% in previous studies (2), it has been given as 7.7% in a recent study

(6). This case had a favorable outcome after an 8-week course of antibiotic therapy and cardiac surgery.

H. parainfluenzae is a rare causative agent of endocarditis. Blood culture and echocardiography confirmed the diagnosis. Arterial emboli and abscess formation on involved valves and myocardium may occur. It has a good prognosis with a combined medical and surgical approach. Patients may often require surgical intervention during the acute stage.

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