

A Case of Prosthetic Vascular-Graft Infection Due to *Mycobacterium fortuitum*

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Abstract : Case presentation: A 69-year-old Japanese man presented with a low-grade fever and fatigue that had persisted for one month. The patient had an aortic dissection on the aortic arch 13 years prior, an abdominal aortic aneurysm seven years prior, and an aortic dissection on the distal aortic arch one year prior, which were all treated with artificial blood-vessel replacement surgery. Laboratory tests revealed an inflammatory response (CRP 7.61 mg/dl), high serum creatinine (Cr 1.4 mg/dL), and elevated transaminase (AST 47 IU/L, ALT 45 IU/L). The patient was admitted to our hospital on suspicion of prosthetic vascular graft infection. Following further workups on the inflammatory response, an enhanced chest computed tomography (CT) and a non-enhanced chest DWI (MRI) were performed. The patient was diagnosed with a pulmonary fistula and a prosthetic vascular graft infection on the distal aortic arch. After admission, the patient was administered Ceftriaxion and Vancomycine for 10 days, but his fever and inflammatory response did not improve. On day 13 of hospitalization, a lung fistula repair surgery and an omental filling operation were performed, and Meropenem and Vancomycine were administered. The fever and inflammatory response continued, and therefore we took repeated blood cultures. *M. fortuitum* was detected in a blood culture on day 16 of hospitalization. As a result, we changed the treatment regimen to Amikacin (400 mg/day), Meropenem (2 g/day), and Cefmetazole (4 g/day), and the fever and inflammatory response began to decrease gradually. We performed a test of sensitivity for *Mycobacterium fortuitum*, and found that the MIC was low for fluoroquinolone antibacterial agent. The clinical course was good, and the patient was discharged after a total of 8 weeks of intravenous drug administration. At discharge, we changed the treatment regimen to Levofloxacin (500 mg/day) and Clarithromycin (800 mg/day), and prescribed these two drugs as a long life suppressive therapy. Discussion: There are few cases of prosthetic vascular graft infection caused by mycobacteria, and a standard therapy remains to be established. For prosthetic vascular graft infections, it is ideal to provide surgical and medical treatment in parallel, but in this case, surgical treatment was difficult and, therefore, a conservative treatment was chosen. We attempted to increase the treatment success rate of this refractory disease by conducting a susceptibility test for mycobacteria and treating with different combinations of antimicrobial agents, which was ultimately effective. With our treatment approach, a good clinical course was obtained and continues at the present stage. Conclusion: Although prosthetic vascular graft infection resulting from mycobacteria is a refractory infectious disease, it may be curative to administer appropriate antibiotics based on the susceptibility test in addition to surgical treatment.

Keywords : prosthetic vascular graft infection, lung fistula, *Mycobacterium fortuitum*, conservative treatment

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