Infective endocarditis in transcatheter aortic valve implantation

Yoon Seok Koh, Mi Hyoung Moon, Keon Hyun Jo and Hwan Wook Kim

Department of Cardiology, Uijeongbu St. Mary's Hospital, The Catholic University of Korea, Gyeonggi-do, Republic of Korea
Department of Thoracic and Cardiovascular Surgery, Seoul St. Mary's Hospital, The Catholic University of Korea, Seoul, Republic of Korea

Corresponding author. Department of Thoracic and Cardiovascular Surgery, Seoul St. Mary’s Hospital, The Catholic University of Korea, 505 Banpo-dong, Seocho-gu, Seoul 137-701, Republic of Korea. Tel: +82-2-22582858; fax: +82-2-5948644; e-mail: kimhwanwook@catholic.ac.kr (H.W. Kim).

Received 2 May 2013; accepted 7 May 2013

Keywords: Infective endocarditis • Transcatheter aortic valve implantation

An 85-year old man with a history of transcatheter aortic valve implantation (TAVI) for severe symptomatic aortic stenosis was re-admitted with cerebral stroke accompanied by fever. An infected prosthetic valve was revealed by echocardiography (Supplementary Video 1) and retrieved successfully with a surgical approach (Fig. 1).

Supplementary material (Video 1) is available at EJCTS online.

Video 1: Transoesophageal echocardiographic evaluation showing shaggy materials attached to the prosthetic valve with 1-cm floating linear vegetations.

Figure 1: Twelve months ago, a patient with an EuroSCORE for mortality of 25% underwent TAVI of a 26-mm SAPIEN valve (Edwards Lifesciences, Irvine, CA, USA) via the transfemoral approach. On transoesophageal echocardiography, multiple vegetations attached to the prosthetic valve with free-floating linear material (A, arrow) were detected. On the presumption of endocarditis, empiric antibiotic treatment was immediately initiated. Streptococcus anginosus was identified by consecutively taking blood cultures. Because of poor medical conditions, we initially tried to treat the patient medically. However, the patient underwent another event of cerebral stroke 2 weeks postantibiotic therapy. Therefore, we decided to retrieve the infected prosthetic valve through a surgical approach. Intraoperative exploration revealed the infected prosthetic valve to have incomplete pseudoendothelization (B). To extract the prosthesis efficiently without damage to the surrounding structures, it was necessary to crumple and twist the stent. After explantation of the infected prosthesis (C) with radical debridement of the infected annulus, a biological aortic valve replacement was performed along with annula reconstruction with bovine pericardium (B, inlet circle). The patient was discharged with a minor neurological sequelae after 4 weeks of intravenous antibiotic therapy. This case reminds us that surgical aortic valve replacement can still be indicated in high-risk patients with post-TAVI infective endocarditis.