Long-term Durability of Starr-Edwards Caged Valves in Selected Patients

Key words: Starr-Edwards valve, heart valve disease, valve replacement, prosthetic valve dysfunction

To the Editor We read with great interest the recent article by Yokokawa and associates (1). The authors reported a case of prosthetic valve dysfunction 35 years after mitral valve replacement with a Starr-Edwards caged-disc valve. Pannus formation was observed around the prosthetic valve annulus on the left atrial side, and fibrinous soft tissue was attached to the prosthetic valve frame on the left ventricular side. They also described the histopathological findings of the pannus and fibrinous substance; calcification was immunohistochemically positive. There was no structural abnormality detected that would explain the observed dysfunction.

We experienced a similar case in which a 69-year-old woman had cloth-covered Starr-Edwards caged-ball valves implanted in the aortic and mitral valve positions (2). A pre-operative echocardiogram examination showed a mobile mass around the prosthetic valve in the mitral position. The valves were therefore extracted 39 years after implantation because of prosthetic valve stenosis and regurgitation. The removed prosthetic valves showed cloth wear, but we also found no structural abnormalities that could explain the occurrence of prosthetic valve dysfunction. The worn cloth mimicked vegetation; pannus overgrowth on the prosthetic valve ring was thought to have caused a deterioration of the valve which thus led to the observed dysfunction.

Both cases demonstrate the long-term durability of the Starr-Edwards caged valve in selected patients and the importance of improving the design and the materials of prosthetic valves to prevent pannus overgrowth. A careful long-term follow-up is mandatory for patients who are implanted with Starr-Edwards caged valves.

Author’s disclosure of potential Conflicts of Interest (COI). Yoshio Misawa: Advisory role, TERUMO Co.

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References


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