
A 31-year-old patient without the use of warfarin and with an aortic mechanical valve

To the Editor,

Patients with metallic prosthetic heart valves have to use anticoagulants throughout their life because of avoiding prosthetic valve thrombosis. We report the case of a patient with a prosthetic aortic valve without any event to date despite not using warfarin for 31 years. A 53-year-old man who underwent aortic valve replacement (AVR) with a mechanical valve (Medtronic, Inc., Minneapolis, Minnesota) due to aortic valve disease 31 years ago was admitted to the cardiology department with complaints of chest pain and tiredness. In the examinations and anamneses, it was determined that the patient was followed up with acetylsalicylic acid and dipyridamole treatment without the administration of warfarin after the valve replacement. He underwent AVR in 1985 because of severe aortic stenosis. He was recommended warfarin, but he had no anticoagulation since then.

His blood pressure was 125/85 mm Hg; his heart rate was regular at 90 beats/min. The baseline international normalized ratio was 1.1. The findings of his liver, thyroid, and kidney function tests were normal. His medications at home included acetylsalicylic acid 300 mg once a day and dipyridamole 50 mg QD.

Transthoracic and transesophageal echocardiography revealed a non-functional metallic aortic valve with a gradient of 60/80 mm Hg. Fluoroscopy showed minimal motion of the aortic valve prosthesis.

The patient primarily underwent the operation. Cardiac arrest after cross-clamp was observed in the patient who entered

the pump with aorto-bicaval cannulation. After the aortotomy, a pannus-organized thrombus was seen on the mechanical valve. A Medtronic–Pivot supra-annular mechanical valve (number 22) was implanted with individual pleated sutures instead of an old valve. The postoperative clinical course was uneventful. The patient, whose operation was uneventful, was discharged on the 4th postoperative day with the administration of warfarin.

Valve thrombosis and systemic embolism are lethal complications after the use of mechanical heart valves, and to prevent these, anticoagulation therapy is necessary and vital; however, it can also cause fatal bleeding.

Thromboembolism and bleeding with the use of anticoagulants account for 75% of all mechanical valve complications. These complications most frequently occur during the first 6 months after surgery (1). A prosthetic aortic valve is associated with much better survival rates without embolic episodes than a mitral valve (2).

In their study, Andersen et al. (2) reported that after 10 years, there was a 41% incidence of thromboembolism and 17% mortality in 43 patients who discontinued anticoagulation mechanical aortic valve replacement and were followed for a mean period of 7.2 years without anticoagulation.

In the literature, there are some cases without anticoagulation for over 30 years without significant embolic events; such cases have been reviewed in the study by Salmane et al. (3). They have also reported on the longest survey of 37 years (3). Aman (4) has reported another case that has survived for 33 years without anticoagulation.

How these valves were protected for so long remains unknown. Gül et al. (5) first demonstrated a genetic mutation in the coagulation cascade, which can explain long-term survival without anticoagulation.

Although the use of warfarin is an absolute requirement in the current treatment after mechanical valve implantation, the patient has been able to live for 31 years without using warfarin. The use of acetylsalicylic acid may have contributed to the favorable outcome in our patient.

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