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Bioprosthetic mitral valve thrombosis

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An 80-year-old woman presented with an ischaemic stroke one year after an uneventful bioprosthetic mitral valve replacement. Transthoracic echocardiography was of suboptimal image quality; however, Doppler interrogation of the mitral valve revealed a markedly elevated transvalvular gradient (Fig. 1a). Transoesophageal echocardiography showed a large, mobile mass, which was attached to the mitral bioprosthesis and mimicked a ‘thumbs-up sign’ (Fig. 1b; see also Video 1 in the Electronic Supplementary Material). As the patient was afebrile and both blood cultures and ¹⁸FDG PET/CT imaging were negative, bioprosthetic valve thrombosis (BPVT) was considered a more likely diagnosis than endocarditis. Patient was declined for surgery because of the high operative risk. Alternatively, treatment with a warfarin derivate was initiated. Follow-up echocardiography showed a gradual decrease of the echogenic structure size over time (Fig. 1c, d; see also Videos 2 and 3 in the Electronic Supplementary Material), with normalization of the transvalvular gradient.

Clinicians should be aware of BPVT, especially in a patient who presents with a thromboembolic event. Prompt echocardiographic evaluation is essential for the diagnosis of BPVT. Symptomatic BPVT is rare, occurring in <1% of patients undergoing surgical valve implantation. Symptomatic BPVT with a large thrombus (≥ 1.0 cm) requires urgent intervention. In general, surgery is the preferred treatment for symptomatic

BPVT. However, fibrinolysis or oral anticoagulants should be considered in high-surgical risk patients.

Conflict of interest S. Bouwmeester, M. el Farissi and P. Houthuizen declare that they have no competing interests.

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Video online The online version of this article contains 3 videos. The article and the videos are online available (<https://doi.org/10.1007/s12471-022-01659-x>).

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Fig. 1 Bioprosthetic valve thrombosis **a** Elevated transvalvular gradient. **b** Echogenic mass attached to mitral bioprosthesis. **c,d** Gradual decrease of echogenic mass under oral anticoagulant therapy

