



CASE REPORT

Late device embolization in a persistent mitral paravalvular leak



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KEYWORDS

Paraprosthesis leak;
Device embolization;
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Abstract An 83-year-old man with severe organic mitral regurgitation underwent mitral valve surgery with implantation of a biologic prosthesis. Four months later he presented with hemolytic anemia and heart failure due to severe paravalvular regurgitation. Since the patient refused surgery, the paravalvular leak was closed percutaneously using two Amplatzer devices, with angiographic and clinical success. Two months after the intervention he developed heart failure again and embolization of one of the devices was documented, with significant worsening of paravalvular regurgitation. A redo percutaneous closure was attempted but although initially promising, was ultimately unsuccessful as heart failure symptoms and hemolytic anemia persisted. Surgical correction was the final solution for this case.

This is the second case of late device embolization reported in the literature and highlights the importance of careful long-term follow-up of such patients, as late complications, although rare, may occur.

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PALAVRAS-CHAVE

Regurgitação
periprotésica;
Embolização de
dispositivo;
Intervenção
percutânea

Embolização tardia de um dispositivo numa regurgitação paravalvular mitral persistente

Resumo Um homem de 83 anos com insuficiência mitral orgânica severa foi submetido a cirurgia de substituição valvular com implantação de uma prótese biológica. Quatro meses após a cirurgia desenvolveu anemia hemolítica e insuficiência cardíaca justificadas por uma regurgitação paravalvular mitral severa. Após ter sido recusada cirurgia, foi realizado encerramento percutâneo, usando dois dispositivos Amplatzer, com bom resultado angiográfico e clínico. Dois meses após a intervenção desenvolveu novamente insuficiência cardíaca.

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Documentou-se a embolização de um dos dispositivos com consequente agravamento da regurgitação paravalvular. Foi tentado novo encerramento percutâneo, mas apesar de alguma melhoria inicial, manteve insuficiência cardíaca e anemia hemolítica. Efetuou-se, então, correção cirúrgica da regurgitação paravalvular com resolução do quadro clínico. Este é o segundo caso de embolização tardia de dispositivo descrito na literatura e demonstra a necessidade de um seguimento cuidadoso destes doentes, porque, apesar de raras, as complicações tardias ocorrem.

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Case report

An 83-year-old man was referred for heart failure (HF) symptoms (New York Heart Association class II). Transthoracic echocardiography (TTE) revealed severe organic mitral regurgitation, due to ruptured chordae tendineae (effective regurgitant orifice area of 0.55 cm²) with mild left ventricular enlargement and normal ejection fraction (67% by Simpson's method).

Surgical replacement of the mitral valve with a biologic prosthesis (31 mm Carpentier Edwards) was performed. Four

months later, he was admitted for symptomatic hemolytic anemia (hemoglobin 9 g/dl, high lactate dehydrogenase and undetectable haptoglobin). Transesophageal echocardiography (TEE) showed severe antero-lateral paraprosthetic regurgitation (Figure 1A and B). Reoperation was proposed and refused by the patient. For this reason, and also because of his high surgical risk, it was decided to perform percutaneous paravalvular leak (PVL) closure.

The procedure was performed under general anesthesia, via the left femoral vein under fluoroscopic and TEE guidance. After transeptal puncture, a NuMED Tyshak II

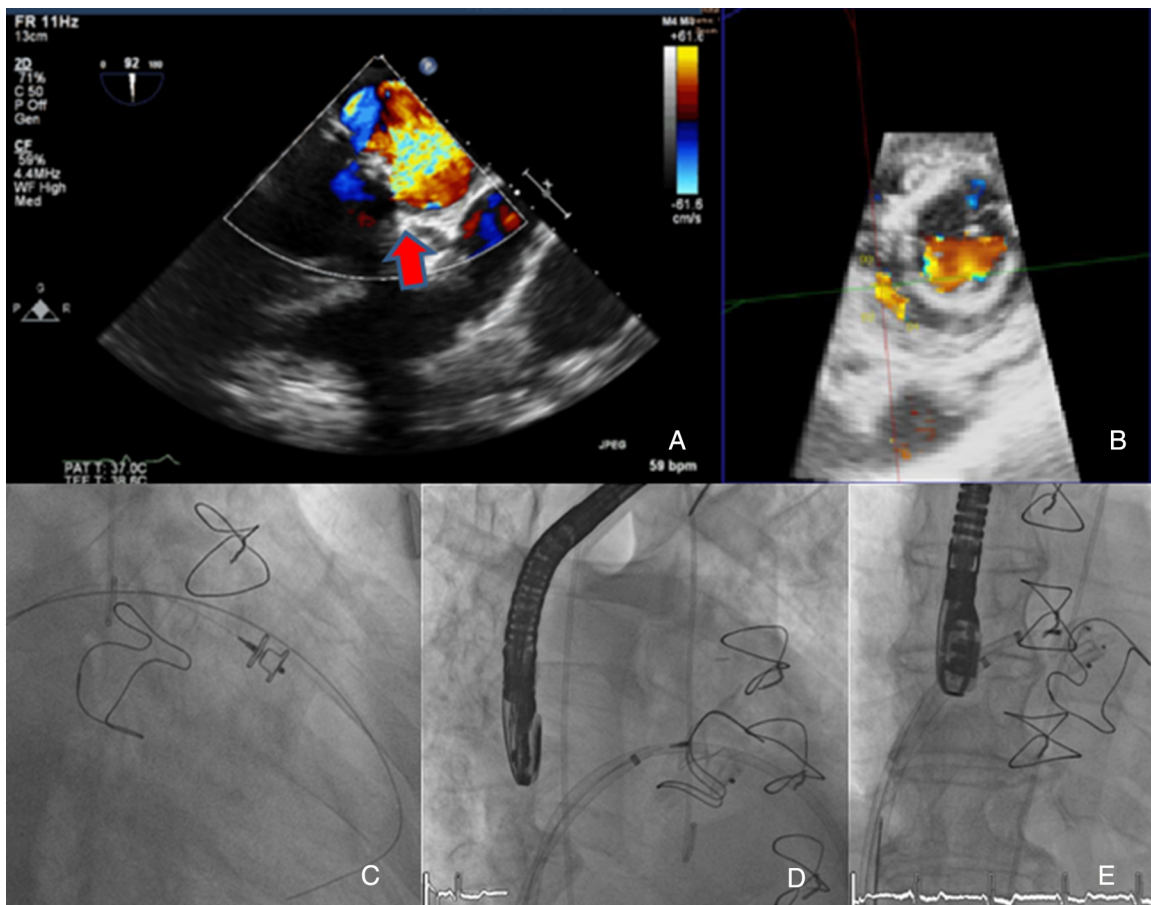


Figure 1 Transesophageal echocardiography showing severe anterolateral paraprosthetic regurgitation (A and B). During percutaneous closure two sheaths were advanced across the mitral leak and an Amplatzer Vascular Plug III (C and D) and an Amplatzer Duct Occluder (E) were deployed.

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