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IMAGE IN CARDIOLOGY

Percutaneous mitral valve repair in a multioperated congenital heart disease patient. The importance of alternative echocardiographic views

Reparação percutânea da válvula mitral num doente com cardiopatia congénita multioperada. Importância de incidências ecocardiográficas alternativas

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A 50-year-old patient with a history of complex congenital heart disease with multiple reoperations including mechanical aortic valve replacement and bioprosthetic pulmonary valve replacement complicated by endocarditis, underwent percutaneous mitral valve (MV) repair (MVR) due to severe symptomatic mitral regurgitation (MR) caused by anterior leaflet prolapse in a dysplastic valve (Figure 1, panels A and B).

The main difficulty of the procedure was to find adequate echocardiographic views to perform the transeptal puncture and valve grasping, since the usual ones were not feasible given the complexity of the patient's heart disease. The use of three-dimensional tools in real-time enabled an adequate orientation to guide the transseptal puncture and evaluate the distance from the foramen ovale to the valve plane (Figure 1, panels C and D). The catheter guide and mitral grasping were performed from transgastric views (Figure 1, panels E and F), which enabled the successful implantation of an NTr MitraClip system (Abbott Laboratories, AbbottPark, IL, USA) with functional and echocardiographic improvement of the MR, leading to a reduction to grade 2 MVR (Figure 1, panels G and H).

Percutaneous MVR with Mitraclip™ is an alternative to high-risk traditional MV surgery even in patients with congenital MV disease. Mitraclip™ implantation in patients with complex congenital heart disease is unusual and the technique is not clearly standardized. Echocardiographic guidance of transcatheter MVR is especially complex because these patients have undergone multiple cardiac surgeries, have an abnormal cardiac position, anatomical

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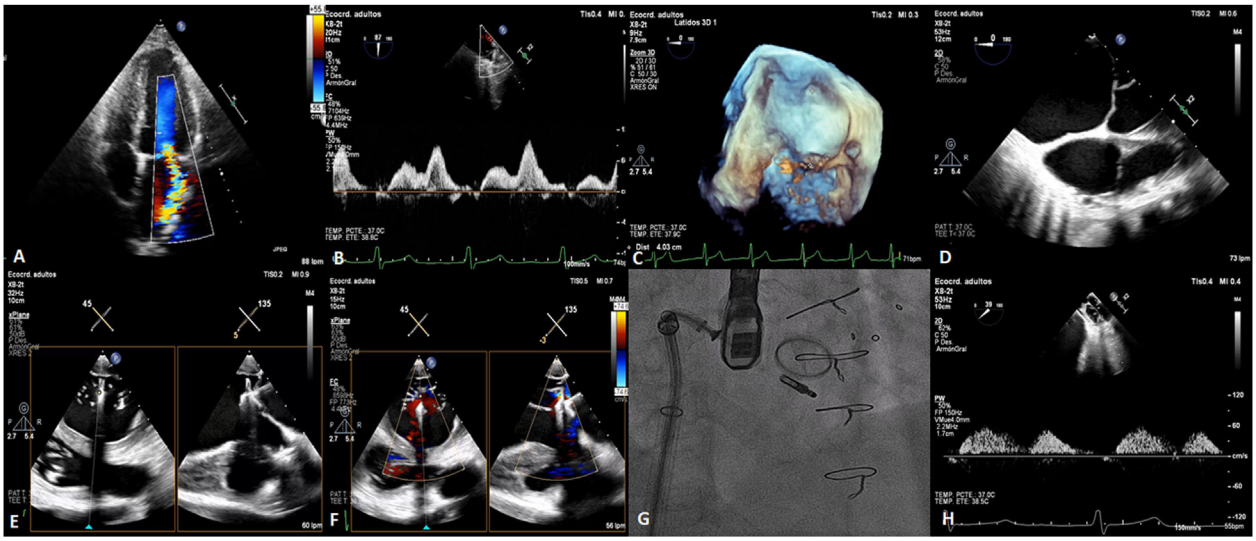

Figure 1

variants and intracardiac devices, leading to a suboptimal echocardiographic window in many cases. This case shows the benefits of alternative echocardiographic views that could be helpful and should be considered in this scenario.

Conflicts of interest

The authors have no conflicts of interest to declare.