Abstract: P833

3D Transesophageal echocardiography in the evaluation of acute severe mitral regurgitation after mitral valve annuloplasty

Authors:
I Noval Morillas¹, F Garcia Lanzas¹, A Chauca Tapia¹, P Cabeza Lainez¹, ¹University Hospital Puerta del Mar, Cardiology - Cadiz - Spain,

Topic(s):
Echocardiography

Citation:

Introduction:
Mitral annuloplasty rings are implanted at the time of surgical repair to support the mitral valve leaflets and prevent further distortion.

Annuloplasty rings are secured by numerous sutures around the edge into the mitral annular tissue. If these tissues are fragile or heavily calcified then the sutures can pull through. Dehiscence of an annuloplasty ring is a rare event following mitral valve repair and a rare cause of recurrent mitral regurgitation post repair.

Clinical Case:
We describe a 66 year-old man, who had been followed for moderate mitral regurgitation and he was admitted in the emergency department due to acute pulmonary oedema. A transthoracic echocardiography (TTE) was performed demonstrating severe mitral regurgitation due to posterior prolapse. The transesophageal echocardiography (TEE) showed a P2-P3 prolapse with a 3D ERO of 0.5 cm² and systolic inversion of the pulmonary venous flow. The heart team decided surgical treatment and a mitral valve repair was carried out with a 29 mm anuloplasty ring plus Alfieri technique over the septal commissure. The patient was discharged with a normal TTE.

Two years after surgery, with suspicion of mitral ring dehiscence in the TTE, a new TEE was performed demonstrating a large area of crescent shaped ring dehiscence extending from 4 to 9 o’clock on the surgeon’s view of mitral valve, without mitral regurgitation. The TEE was again performed the next year with the same TEE image, size and mitral function (Figure 1); so conservative treatment of the dehiscence was decided.

Conclusion:
Real-time 3-dimensional echocardiography is a valuable tool in the diagnosis of heart disease, especially for mitral valve pathology, its optimal localization, extension, and mechanism.

It simplifies communication and visualization of echocardiographic findings between the anesthesiology and surgical teams. In emergent as well as non emergent procedures, it provides a prompt and accurate diagnosis of mitral valve pathology for immediate decision making and treatment.
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