Unusual ethiologies of severe acute mitral regurgitation not requiring surgery

Mahnoosh Foroughi*, Seyed-Ahmad Hassantash, Habib Saadat, Arash Ghanavaty
Department of Cardiac Surgery, Modaress Medical Center, Saadat Abad, Tehran, Iran

Received 29 May 2008; accepted 1 July 2008; Available online 13 August 2008

Keywords: Mitral valve regurgitation; Takotsubo syndrome; Emergency cardiac surgery

We read with great interest the impressive article by Lorusso and colleagues [1] who tried to analyze postoperative results of emergency surgery for acute mitral regurgitation (MR). According to our experience in the management of patients in our region, we would like to express one very important issue related to the challenging subject of acute MR etiology which may change treatment modality in some patients. Among the few patients treated by medical therapy alone, our last case is reported here.

A 54-year-old woman with past history of variant angina and asthma presented to the emergency room with palpitation and weakness after intense emotional stress. A coronary angiogram (CA) performed 6 months earlier for atypical chest pain was normal. An echocardiographic study at that time was within normal limits with a mild to moderate MR. Auscultation showed systolic murmur (Levine 3/6) at apex and coarse crackles in bilateral lung fields. Heart rate was 120/min with blood pressure of 70/36 mmHg. Electrocardiogram on admission showed ST segment elevation in DI and aVL and T-wave inversion in the anterior leads. The blood tests revealed normal levels of myocardial enzymes. Chest X-ray showed pulmonary congestion and a normal cardiothoracic ratio. Transthoracic echocardiography revealed wide anteroapical hypokinesia and reduction of global LV ejection fraction to <20% with severe eccentric, posteriorly directed MR. Mitral valve annulus was in normal range with intact subvalvular structures and pulmonary systolic pressure of 40 mmHg. No evidence of endocarditis was found. CA showed normal coronaries, severe MR and confirmed the EF observed in the echocardiogram. Serial measurements of myocardial necrosis markers, erythrocyte sedimentation rate and C-reactive protein were within normal limits. Mitral valve repair/replacement was thought not to be beneficiary to the patient.

Therapy with ACE-inhibitors (captopril 25 mg/day) and beta blockers (6.25 mg of carvedilol), helped her with rapid clinical condition recovery. On the fifth day, she was completely free of symptoms and the murmur disappeared. Echocardiogram 6 months after the episode was compatible with her echocardiogram performed 6 months before the cardiac attack.

First, it must be kept in mind that patients with acute MR may have reversible causes and not all cases have the same pathophysiology requiring surgical intervention. This may be due to different main mechanisms of the acute MR or the patient may respond favorably to medical treatment. This is particularly true for patients with acute MR with no obvious pathophysiology.

Secondly, medical conditions such as Takotsubo cardiomyopathy (apical ballooning) may apply to some patients with acute MR [2,3]. The described case may be diagnosed as such because of: her acute cardiac syndrome in a postmenopausal woman preceded by stress; normal CA; no evidence of any other possible causes of MR and her favorable response to medical therapy with good prognosis. A spectrum of temporary focal or even completely diffuse wall motion abnormalities other than what is described in Takotsubo may also apply to some patients requiring further investigation.

References


* Corresponding author. Tel.: +98 9171613954; fax: +98 2122083106. E-mail address: mahnoosh.foroughi@gmail.com (M. Foroughi).

doi:10.1016/j.ejcts.2008.07.009