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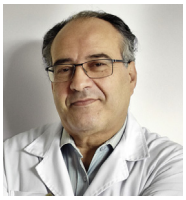

IATROGENIC LEFT VENTRICULAR RUPTURE. REMAIN INVENTIVE!

To the Editor:

I read with much interest the Invited Expert Opinion on "Left Ventricular Rupture After Mitral Valve Replacement" by Dr Tirone David in the September issue of the *JTCVS Open*.[1] It emphasizes the deadly nature of the complication and the technical complexity of the repair, a task sometimes impossible. Often, the external site of rupture is situated far away from the originating internal point that, however, is not always identifiable. Also, there are some other causes of iatrogenic left ventricular rupture. I write this letter to bring to the attention of the readers of the *Journal* one case that, in my opinion, highlights the difficulties identified by Dr David and was treated by a previously undescribed approach (however recently reported elsewhere).[2]

I refer to a 79-year-old female patient who had surgery for severe mitral valve regurgitation caused by posterior leaflet prolapse and calcified annulus. She also had hypertrophic obstructive cardiomyopathy with a left ventricular outflow tract gradient of 45 to 50 mm Hg. The cardiomyopathy was initially addressed with an extended myectomy, performed from the aortic root. After unsuccessful repair that resulted in systolic anterior motion, the mitral valve was replaced by a bioprosthesis, with partial preservation of the posterior leaflet. The patient had an uneventful immediate postoperative course, but on the second day there was a sudden severe drainage of blood, which prompted emergency pericardial exploration, where a large subepicardial hematoma was identified in the posterior left ventricular wall.

Having suspected rupture of the atrioventricular junction, cardiopulmonary bypass was initiated, the left atrium was opened, and the mitral prosthesis excised from its annular implantation. No rupture could be identified at this place. An alternative diagnosis was rupture at the site of the myectomy, but neither this nor any other site was internally identified. The mitral prosthesis was reimplanted and the atrium closed. As the hemorrhage from the back of the heart persisted, an attempt was made at controlling it from the epicardial side by using a patch of TachoSil (human fibrinogen + thrombin; Nycomed, Baxter, Zurich, Switzerland) to fill the subepicardial hematoma cavity and covering the surface with SURGICEL (Ethicon, Somerville, NJ). This was repeatedly unsuccessful.

In despair, a double-layer ordinary surgical gauze pad was used to completely wrap the ventricular wall, which resulted in immediate cessation of the bleeding. The gauze pad was left in place for planned removal later, which was done on the 10th day. The patient had an uneventful recovery and was discharged home 7 days later. This case reminds me of a Brazilian surgeon and friend who, also in absolute despair, in a similar case, used common-use superglue (cyanoacrylate) to achieve adherence of a bovine pericardial patch to the epicardium. These cases highlight the need to exercise some surgical inventiveness spirit when all else fails.

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