



SEVERE MR CAUSED BY CHORDAL RUPTURE AFTER PERCUTANEOUS MITRAL COMMISSUROTOMY

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History and physical:

54-year-old woman with chronic AF with liver cirrhosis presented with dyspnea on exertion. Her physical examination showed loud S1 with diastolic rumbling murmur grade III/VI. She was diagnosed with severe rheumatic mitral stenosis.

Imaging:

TTE revealed rheumatic change of mitral valve with symmetrical commissural fusion. MVA by planimetry was 0.56 sqcm. and mean gradient across MV was 11 mmHg at HR 60-70 /minute. The Wilkins score was 8 (sub valve 3, thicken 2, mobility 2 and calcification 1). This finding compatible with severe rheumatic MS. Mild MR and mild TR was noted. Her left ventricular function was mildly reduced with global wall hypokinesia. Coronary angiogram was done and showed normal coronary artery.

Indication for intervention:

Percutaneous balloon mitral commissurotomy was done according to severe symptomatic rheumatic mitral stenosis despite adequate dose of Beta -blocker.

Intervention:

The procedure was done under local anesthesia and conscious sedation. TEE was done for rule out LA thrombus. After that, RHC was done via Right femoral approach. The mean LA pressure and mean gradient across MV was 9 and 4 mmHg respectively. Trans-septal puncture was performed under TEE guided. Then ACCURA balloon was pass through the MV after septal dilatation. After the balloon position was checked and no indentation sign. The balloon was inflated at size 25 mm. The mean gradient across MV was decreased to 3 mmHg with rising in mean LA pressure to 14 mmHg. TEE showed MVA was increased to 1.3 sqcm. with splitting of medial commissure. However, there was unfortunately chordal rupture causing moderately severe MR. The procedure was terminated and intravenous nitroglycerin was given as afterload



reduction. The patient's hemodynamic was stable during hospital admission. The TTE was done and showed residual moderate MS (MVA. by planimetry 1.48 sqcm.) with severe MR. Then the patient was scheduled for elective Mitral replacement surgery.

Learning points of the procedure:

This patient demonstrates MR complication after PMC causing by chordal rupture from severe subvalvular disease. In addition to the Wilkins score, extent of subvalvular disease should be considered to avoid MR complication. In case of higher degree of subvalvular disease, stepwise balloon dilatation should be used for reducing the complication. Additionally, TEE assisted balloon positioning can avoid balloon impeding subvalve apparatus during inflation and reducing MR complication.



2 (4).mp4



1 (3).mp4

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