Significant Improvement of Dyspnoea in a Pregnant Patient with Severe Pulmonary Hypertension and Severe Mitral Stenosis with A Percutaneous Trans-venous Mitral Commissurotomy.

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Abstract

Background: In developing countries, rheumatic heart disease remains a common cause for valvular heart disease in pregnant women, of which mitral stenosis (MS) is the commonest manifestation. Due to the hemodynamic changes in pregnancy, MS that was tolerated before pregnancy can become symptomatic as pregnancy progresses. Complications of MS in pregnancy include pulmonary hypertension (PH), pulmonary congestion, cardiac failure, cardioembolic phenomena and arrhythmias. Risks of preterm delivery, intrauterine growth restriction, maternal and feto-natal mortality are also raised significantly. Intervention prior to pregnancy is recommended in the European Society of Cardiology (ESC) and American Heart Association (AHA) guidelines. In the ESC guidelines, patients with moderate to severe MS are also counseled against pregnancy. Nonetheless, for pregnant patients with severe MS with severe PH, successful pregnancies have been noted in literature and reinforce PTMC as the recommended intervention. Case report: We present a case of a 27-year-old female who presented with progressive dyspnea. She was 26 weeks pregnant and was breathless at rest (NYHA IV). During investigation for the dyspnea, a transthoracic echocardiogram (TTE) was performed, showing severe pulmonary hypertension (PH) with pulmonary artery systolic pressure (PASP) of 104 mmHg and severe mitral stenosis (MS) with valve area of 0.5 cm². A percutaneous transvenous mitral commissurotomy (PTMC) was performed which improved the valve area to 1.39 cm². Within 24 hours of the procedure, the patient’s breathing had improved significantly and she was able to mobilize around the ward (NYHA III). Her symptoms continued to improve to NYHA II and her PASP improved to 40 mmHg. She delivered a healthy male baby at 35 weeks via a Caesarean section. Conclusions: PH in pregnancy can cause a multitude of complications. PTMC is an minimally invasive, acceptable and indicated procedure for managing symptomatic pregnant patients with severe MS and severe PH and is recommended in major guidelines.