

Clinical Presentation

36-year-old A woman Latin America from presented with dyspnea after cesarean five days section placental for abruption. Exam revealed hypertension, B severe hypervolemia, and hypoxemia, concerning for onset heart new peripartum failure and cardiomyopathy (PPCM). She started on was magnesium and drips, nitroglycerine bilevel, and intravenous diuresis with furosemide. Transthoracic echocardiogram (TTE)

showed newly diagnosed chronic rheumatic heart disease (RHD).



Figure 1: TTE was enhanced with real-time and post-processing 3D-rendering of the mitral valve (MV) for better visualization of the leaflets and segments, and hemodynamic assessment. Parasternal long axis (PLAX) view revealed diastolic doming of A2 segment and As such, comprehensive limited mobility of P2 segment (1A). Parasternal short axis view (PSAX) at the MV level showed thickened and calcified leaflet tips, restricted diastolic opening of the entire valve, and prominent thickening in the anterolateral commissure between A1 and P1 segments with accompanying limited mobility of the segments (1B). Apical 4-chamber view redemonstrated (1C). Color doppler, both analysis in the apical 4-chamber and apical 3-chamber views showed aliasing of mitral inflow (1D). Pulse-wave doppler of mitral inflow revealed abnormal flow pattern, with increased velocity and elevated peak and mean gradients of 19.2 and 8.4 mmHg, respectively (1E). Color doppler with low convergence across the MV (1F), which along with MV area assessment by planimetry on 3D imaging (1G-H), term approximated an MS area of 1.13-1.9cm². Given the patterns of MV leaflet thickening and calcification, limited segmental mobility, velocities and pressure gradients, the patient was diagnosed with mild-moderate MS, likely secondary to rheumatic heart disease.

Given the concern for concurrent PPCM, 3D-TTE (Figure 1) was performed which showed chronic RHD. Given these findings, intravenous diuresis with furosemide, afterload reduction with enalapril and spironolactone, and rate control with carvedilol were carefully initiated with improvement in respiratory and volume status. Intramuscular penicillin G was started for chronic RHD prophylaxis against group A streptococcus (GAS). After medical optimization, she was discharged home safely with her newborn with plans for tubal ligation given PPCM.



Dyspnea After Delivery: A 3D Echocardiographer's Diagnosis of Rheumatic Mitral Stenosis Unmasked By Peripartum Cardiomyopathy

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Imaging Findings

Role of Imaging in Patient Care

Disclosures: All authors have no disclosures.





Discussion

Pregnancy causes increased cardiac output and circulatory volume. PPCM is a form of acute systolic heart failure associated with increased morbidity and mortality. Obstructive valvular lesions like MS, including MS from RHD, are preload dependent, with gradients increasing with rises in cardiac output. Therefore, valvulopathy and PPCM significant have can impact during pregnancy. echocardiographic valve crucial İS to tailoring short-and longmanagement strategies.

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