Atrial Fibrillation(AF) as an incidental finding in the mid-trimester due to severe Mitral Stenosis (MS)- How to proceed?

Gisha M, Ashraf E, Athika S, Abdul Vahab, Mitko K. WWRC, Hamad Medical Corporation, Qatar University, Qatar.

Background

- Pregnancy haemodynamic demand in severe MS can precipitate HF in 2nd trimester, labour or postpartum.
- Vaginal delivery under PCEA is feasible after PTMC in the optimal 2nd-trimester window.
- Multidisciplinary peripartum management is essential.

Case description

- 39-yr G6P3 (all prior vaginal), 17 weeks: palpitations + SOB.
- ECG: fast AF refractory to meds → responded only to DC cardioversion.

Further management

- TTE: severe MS (MVA 0.6 cm^2), mean MVPG 15 mm Hg; PH (RVSP 56 mmHg); dilated LA (50 mm)
- Started metoprolol + furosemide + therapeutic enoxaparin
- MDT: PTMC at 19 weeks
- Post-PTMC TTE: MVA 1.4 cm^2; mean MVPG 8 mm Hg; asymptomatic (NYHA I)
- 2^{nd} MDT: monitored vaginal delivery at 37 weeks under PCEA
- Enoxaparin stopped 24 h pre-induction; PCEA per protocol
- Prep: arterial line + IV metoprolol; euvolaemia maintained
- Healthy infant delivered
- Postnatal: ICU monitoring; therapeutic enoxaparin restarted
- Discharged stable with cardiology follow-up

Discussion & Teaching points

- Pregnancy can unmask MS symptoms (↑LAP from ↑blood volume, CO & HR in 2nd trimester).
- Tachycardia poorly tolerated (short diastole → LA cannot empty); maintain sinus rhythm.
- Serial TTE every trimester to track MVPG.
- Medical management- beta blockers, diuretics; Anticoagulation for dilated LA/ AF
- If medical therapy fails: PTMC at 22-28 weeks (minimally invasive, 97% success, less risk of foetal death).
- Once PTMC fails: open mitral commissurotomy.
- Vaginal delivery tolerated if asymptomatic.
- Start epidural early (blunts labour-related sympathetic surges).
- LSCS: low dose CSE preferred (consider GA if NYHA III-IV symptoms).
- Postpartum: monitor closely (↑preload → pulmonary oedema).