# Timing, teamwork, and a beating heart: Coordinated care in a cardiac pregnancy crisis

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## ABSTRACT

**Introduction:** Cardiac disease complicating pregnancy contributes significantly to maternal morbidity and mortality. Severe mitral stenosis, especially of rheumatic origin, presents a high-risk during pregnancy due to increased hemodynamic demands. This case highlights the complexity and success of managing a pregnant woman with decompensated severe mitral stenosis and atrial fibrillation through a multidisciplinary approach involving simultaneous cesarean delivery and mitral valve replacement. **Case Description:** A 32-year-old gravida 2 at 25 weeks gestation was diagnosed with dengue fever and fast atrial fibrillation was ventilated. Echocardiography showed severe rheumatic mitral stenosis (mitral valve area 0.8 $cm^2$, mean gradient 11 mmHg). She was discharged well with a follow-up but re-presented at 26 weeks with heart failure symptoms to the ER, requiring inotropic support and admission to our cardiac centre. Repeated echocardiography showed worsening stenosis with a mean gradient of 18 mmHg. A multidisciplinary team (MDT) comprising cardiology, cardiothoracic surgery, obstetrics, anaesthesia, and neonatology planned for inpatient monitoring, aiming to prolong pregnancy to 32 weeks. However, rising pro-BNP levels indicated decompensation. At 29 weeks, the patient underwent elective cesarean section with bilateral salpingectomy followed immediately by mitral valve replacement with a mechanical prosthesis in the same setting. She was extubated on postoperative day 2 and discharged well on postoperative day 10. **Discussion:** Cardiac surgery in pregnancy is usually avoided due to its high mortality; however, this case demonstrates that performing caesarean section and valve replacement in a tertiary cardiac centre with a group of experts is an option to improve maternal and perinatal survival.