

Intraoperative cardiac arrest in a patient with peripartum cardiomyopathy: a case report

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Background

Cardiac arrest during labour is a rare but life-threatening event, occurring in approximately 1 in 20,000 to 1 in 50,000 deliveries¹. It is often triggered by obstetric complications or pre-existing cardiovascular conditions¹. Prompt recognition and intervention, including CPR, defibrillation, and emergency caesarean delivery, are essential for improving maternal survival.

Case Report

AM, a 35-year-old nulliparous female with preeclampsia was admitted at 35+5 weeks gestation. AM was stable on labetalol, but due to an abnormal CTG, oligohydramnios and a small-for-gestational-age fetus, induction of labour was planned. A cervical ripening catheter was placed overnight and artificial rupture of membranes the following morning. The patient developed a wheeze and oxygen desaturation to 90%. A CXR suggested venous congestion and pulmonary oedema (Image A), and IV antibiotics were administered for a suspected lower respiratory tract infection.



Image A: CXR: Venous congestion and prominence of the interstitial markings bilaterally suggesting fluid overload/early interstitial oedema; and presence of blunting of the left costophrenic angle in keeping with small effusion.

Oxytocin and an epidural were commenced. The patient's oxygen saturation rapidly decreased to 67% whilst on 10L oxygen and there was a concurrent fetal bradycardia which led to the decision for a Category 1 caesarean section.

Operative Management and Findings

Following anaesthetic induction, the patient experienced a pulseless electrical activity cardiac arrest, requiring CPR for 6 minutes and subsequent return of spontaneous circulation. The placenta was delivered, and uterine tone was managed with IV ergometrine after unsuccessful Bakri balloon placement. The patient was transferred intubated to ICU. She was subsequently diagnosed with peripartum cardiomyopathy and found to have moderate left ventricular dysfunction with a reduced ejection fraction of 26%. AM went on to make a full recovery, with ongoing outpatient management with cardiology.

Discussion

This case highlights the rare but critical occurrence of cardiac arrest intraoperatively due to peripartum cardiomyopathy. Early intervention with caesarean delivery, resuscitation, and uterotonic therapy were key to maternal survival. Multidisciplinary care and preparedness for complications like peripartum cardiomyopathy are essential in managing high-risk pregnancies.

References

1. Liu, S., Joseph, K. S., & Lisonkova, S. (2011). Maternal cardiac arrest and the role of obstetric complications. *Obstetrics & Gynecology*, 117(6), 1122-1131.