

INTRODUCTION

Peripartum cardiomyopathy (PPCM) is a rare disease of unknown cause in parturients. A high index of suspicion should be maintained in pregnant and peripartum women who present with sudden cardiac decompensation without any prior history of cardiac disease. The diagnosis can be confirmed with echocardiographic evidence of global left ventricular dysfunction. Timely diagnosis and institution of therapy for heart failure can avoid adverse outcomes in a parturient with PPCM. In this report, we describe the management of primigravida presenting to the hospital's L&D unit with acute cardiac decompensation and respiratory distress due to PPCM. The case also highlights that though preeclampsia and PPCM are two separate entities, these can coexist in the same parturient due to the common pathophysiological mechanism.

PATIENT HISTORY

- 38-year old, G1P0 with presenting with pre-term labor at 36 weeks and pre-eclampsia with severe features.
- PMH: chronic HTN, GDM type A2, morbid obesity
- PSH: gastric bypass four years prior, pelvic and LE fracture repair surgery secondary MVA.
- Presently complaining of shortness of breath, chest tightness and orthopnea.
- Family History: a brother who died from an unspecified "heart condition" in his early twenties.
- Physical exam: BP 172/103 mmHg, HR 129x', SP02 98% on RA, RR 18, temp 37.1C, weight 99.8Kg, height 1.63m, BMI 37.74.
- EKG: new LBBB, otherwise normal, elevated LFT's, K⁺ of 5.4mmol/L; all remaining laboratory values normal.

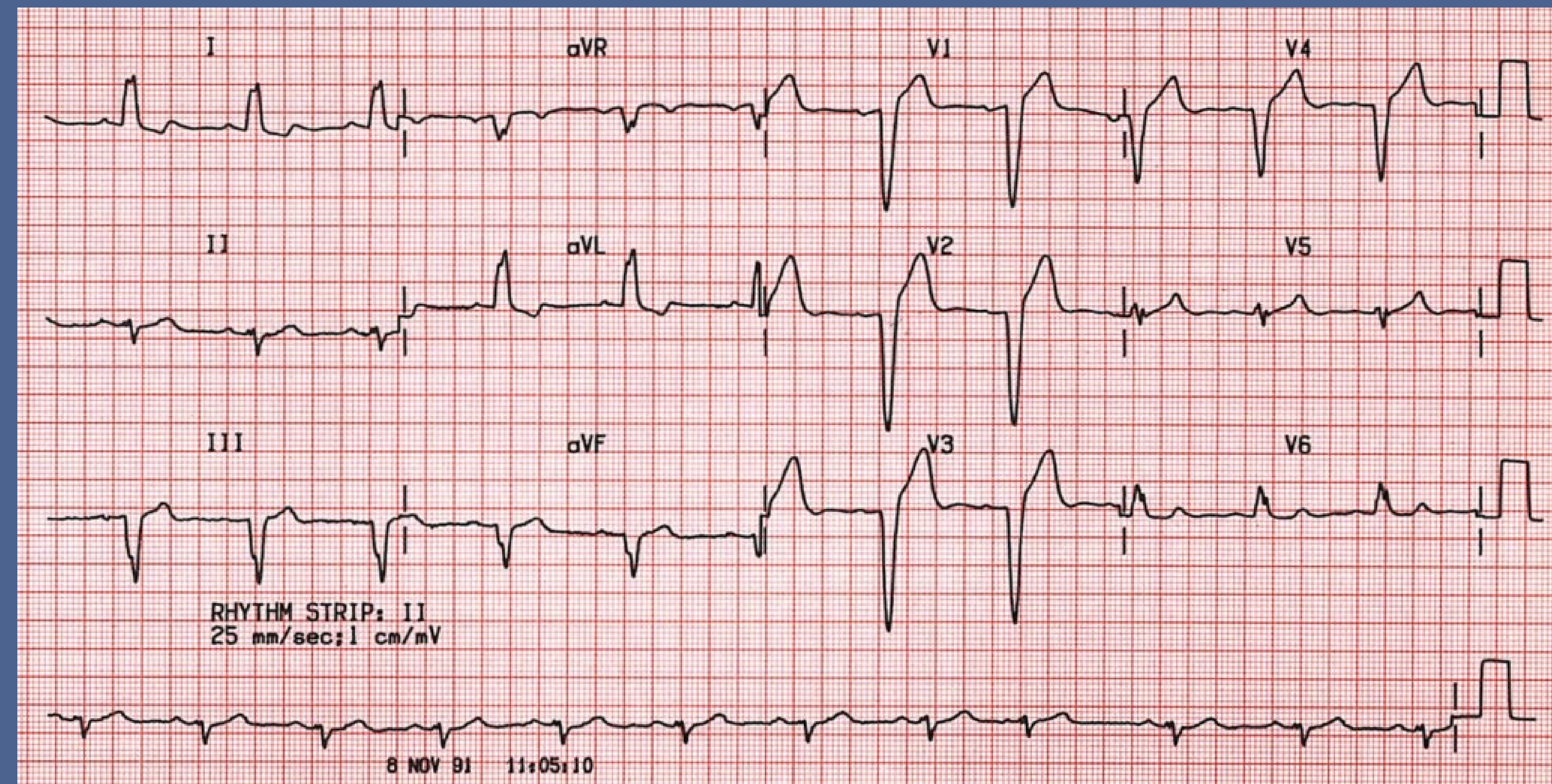


Image 1. ECG with Left Bundle Branch Block

Undiagnosed Dilated Cardiomyopathy Complicating Severe Preeclampsia

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CLINICAL COURSE

- Given the patient's symptoms, EKG findings and history, our cardiology colleagues were consulted.
- Transthoracic echocardiogram: LVEF of 15%, dilated LV, moderate MR, normal RV function.
- In the setting of worsening pre-eclampsia, MFM service advised urgent delivery cesarean delivery given prior pelvic surgical history.
- In the operating room, preoperative invasive arterial monitoring was initiated. A Combined Spinal Epidural Technique was utilized with a spinal dose of 20mcg of Fentanyl, 200mcg of Morphine PF and 0.5ml of 0.75% hyperbaric bupivacaine followed by lidocaine 2% administered via epidural catheter in increments of 5ml/5min to a total of 10ml, obtaining a T4 level.
- An uncomplicated cesarean delivery was completed without adverse events.

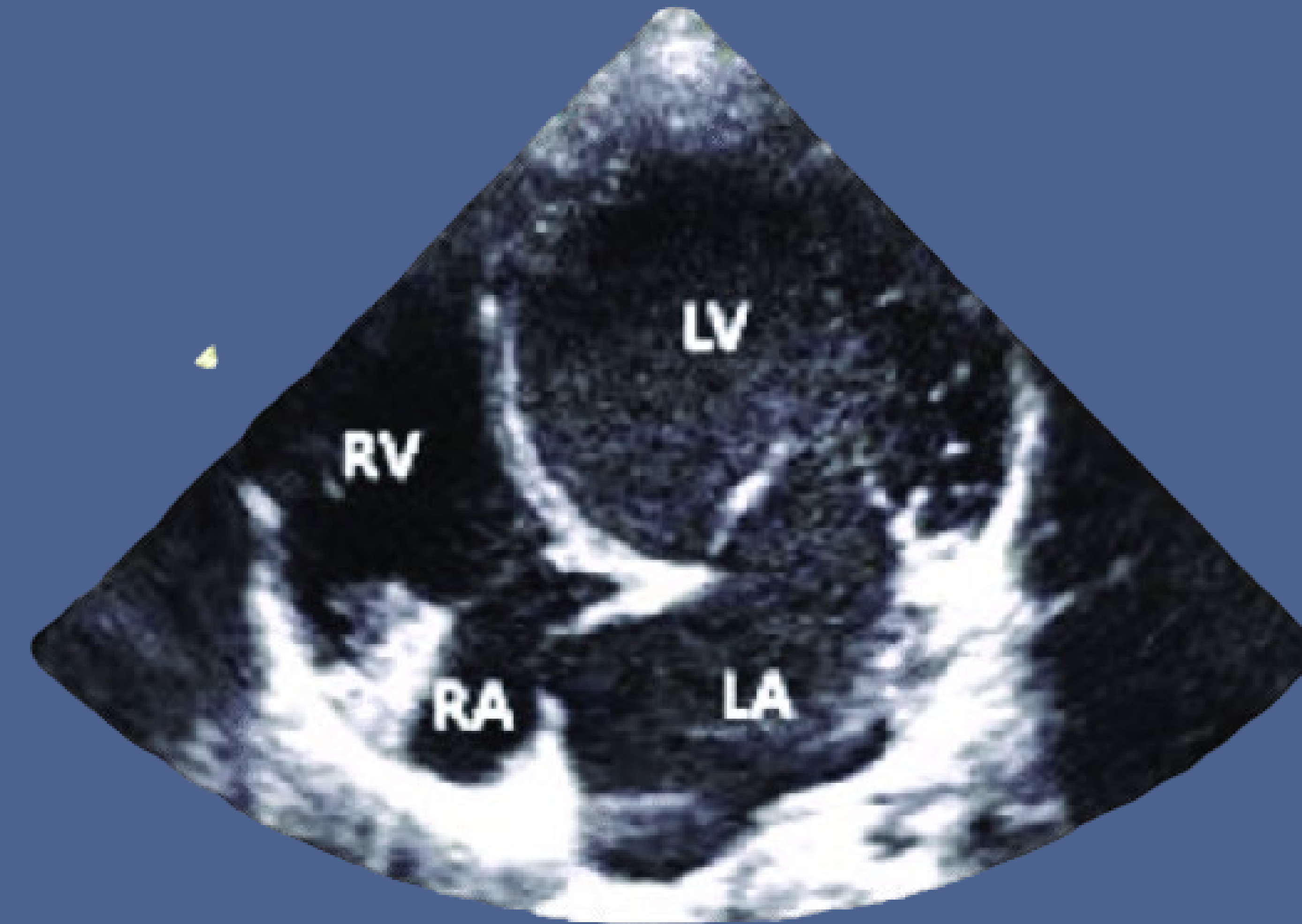
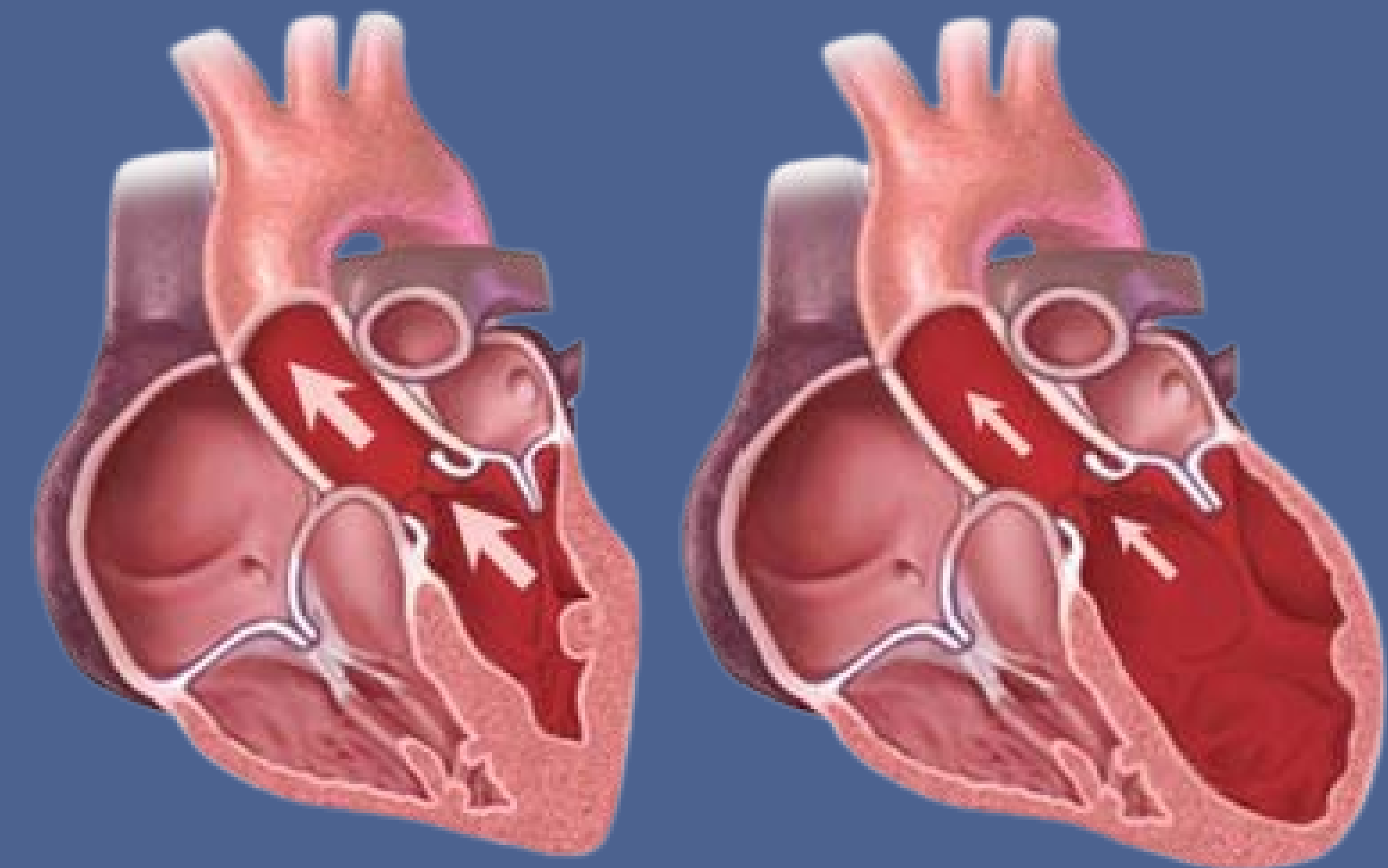


Image 2.
Echocardiogram
revealing dilated
cardiomyopathy

Image 3. Normal (left)
vs dilated
cardiomyopathy (right)



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DISCUSSION

Currently there is little evidence suggesting the anesthetic management in this setting for patients with peripartum cardiomyopathy, fluid restriction and the use of beta blockers is recommended, reduced stroke volume and increased afterload in the setting of severe pre-eclampsia is considered to be deleterious.

The option of neuraxial anesthetic (CSE), with an initial small intrathecal dose and posterior slow induction of the epidural block, allowed the development of a surgical anesthetic level (T4) in a gradual and safe way without sudden and drastic reductions of the SVR also avoiding unnecessary increases in myocardial O₂ demand.

To ensure a good outcome it is important to assess the capabilities of your institution in terms of resources, additional staff and services.

REFERENCES

- 1.Bhakta P, Mishra P, Bakshi A, Langer V. Case Report and Mini Literature review: Anesthetic Management for Severe Peripartum Cardiomyopathy Complicated with Preeclampsia using Sufentanil in Combined Spinal Epidural Anesthesia. Yonsei Med J. 2011 Jan;52(1):1-12
- 2.Okeke T, Ezenyeaku C, Ikeako L. Peripartum Cardiomyopathy. ANN Med Health Sci Res. 2013;3(3): 313-319.

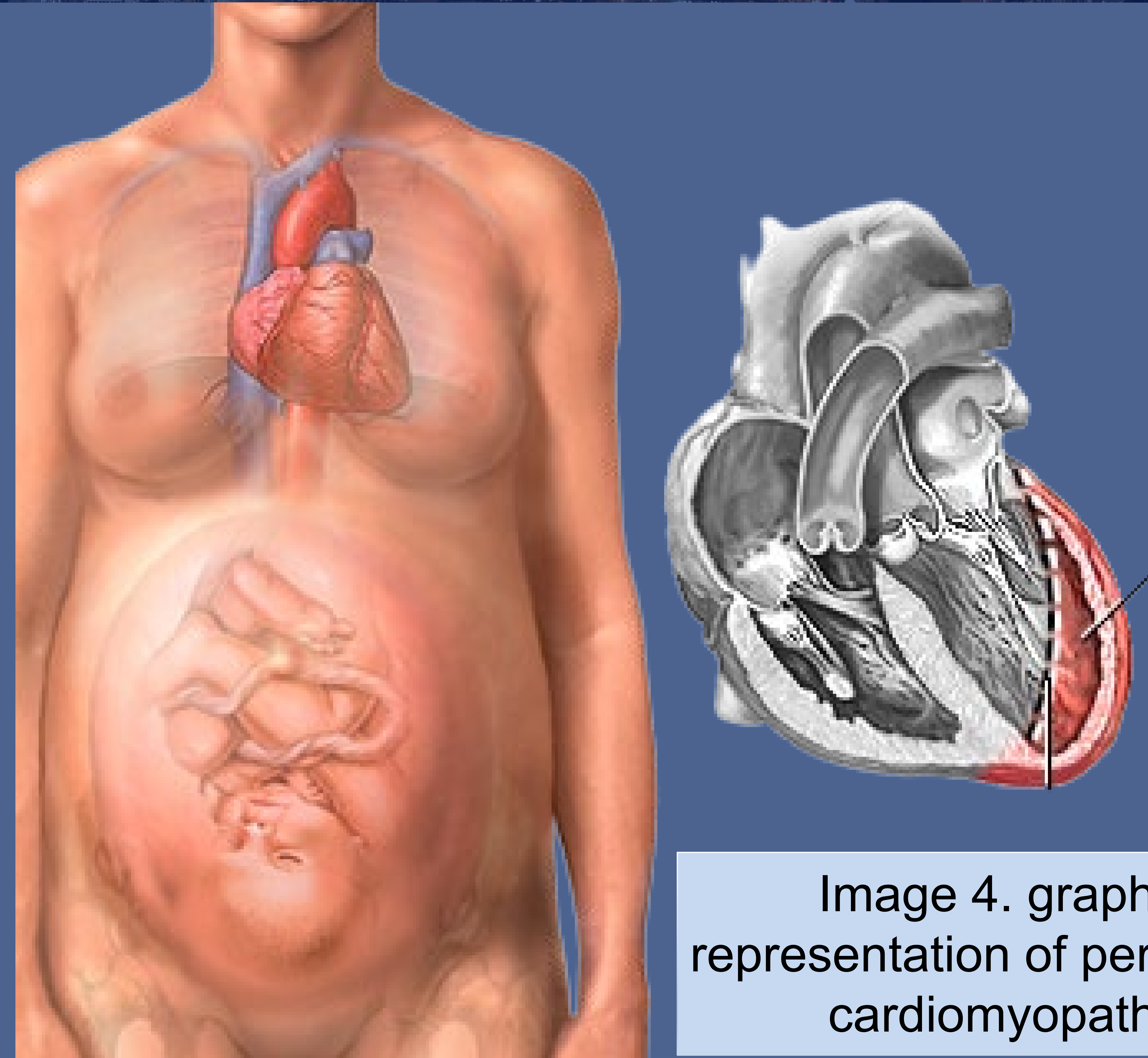


Image 4. graphic representation of peripartum cardiomyopathy