

Management of Labor Induction in a Parturient with Symptomatic Pericardial Effusion

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Background:

- Acute idiopathic pericarditis, presumed to be of viral etiology, is most common cause of pericardial effusion¹. Pregnancy does not increase susceptibility to pericardial disease.
- Approximately 40% of pregnant women are found to have hydropericardium by the 3rd trimester. Characterized by mild, benign pericardial effusion that typically resolves after delivery².
- Transthoracic echocardiography (TTE) is the imaging of choice to diagnose effusions and evaluate for tamponade physiology.
- During pregnancy, the normal increase in blood volume can delay tamponade physiology and larger effusions may be better tolerated².

1. Azarbal A, LeWinter MM. Pericardial Effusion. *Cardiol Clin*. 2017;35(4):515-524. doi:10.1016/j.ccl.2017.07.005

2. Imazio M, Brucato A, Rampello S, et al. Management of pericardial diseases during pregnancy. *J Cardiovasc Med (Hagerstown)*. 2010;11(8):557-562. doi:10.2459/JCM.0b013e3283352356



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Case events:

- 30 y.o. G1P0 female @ 38w3d presented for IOL given worsening dyspnea in the setting of a known, large pericardial effusion.
- TTE showed large effusion (up to 4.8cm with largest component next to LV and apex) with early signs of tamponade physiology, including right ventricular diastolic collapse and RV invagination during systole.
- Multidisciplinary discussion with Cardiology regarding pericardiocentesis to drain effusion. Deferred at that time and decision made to manage on L&D with Cardiology immediately available if she decompensated.
- Radial arterial catheter and lumbar epidural were placed. Large bore intravenous access confirmed.
- Uneventful vaginal delivery without hemodynamic compromise or signs of worsening cardiac tamponade.
- Postpartum CT scan showed a large anterior mediastinal mass. Underwent biopsy and pericardiocentesis which showed Grade IV malignant thymoma. Subsequently treated with chemotherapy and radiation.

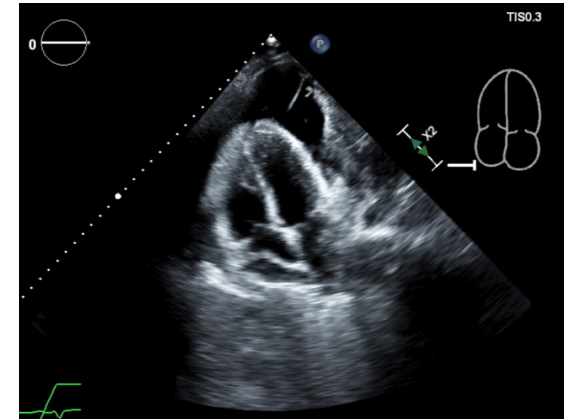


Figure 1: Apical 4-chamber TTE view with large pericardial effusion adjacent to LV.



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Learning points:

- Cardiac tamponade is the most significant complication from pericardial effusions.
- During pregnancy, the normal increase in blood volume can delay tamponade physiology².
- The autotransfusion from birth may be well-tolerated in parturient with pericardial effusions as maintaining adequate preload is a main goal of managing tamponade physiology.
- Invasive hemodynamic monitoring and adequate intravenous access are imperative in monitoring patients with tamponade physiology to identify and treat any decompensation.
- Multidisciplinary planning and communication for parturients with pericardial effusion is essential.

