

Anesthetic Considerations for Management of a Parturient Undergoing Cesarean Delivery After Mechanical Mitral Valve Replacement

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Introduction

- Women with mechanical heart valves have a higher incidence of:
 - Pregnancy loss
 - Preterm delivery
 - Both bleeding and thromboembolic complications
 - Mortality
- Hypercoagulable state = ↑ risk of valve thrombosis
 - No consensus on optimal anticoagulation regimen
- Some of these women require cesarean delivery for obstetric indications
 - This further ↑ their bleeding risk

Figure

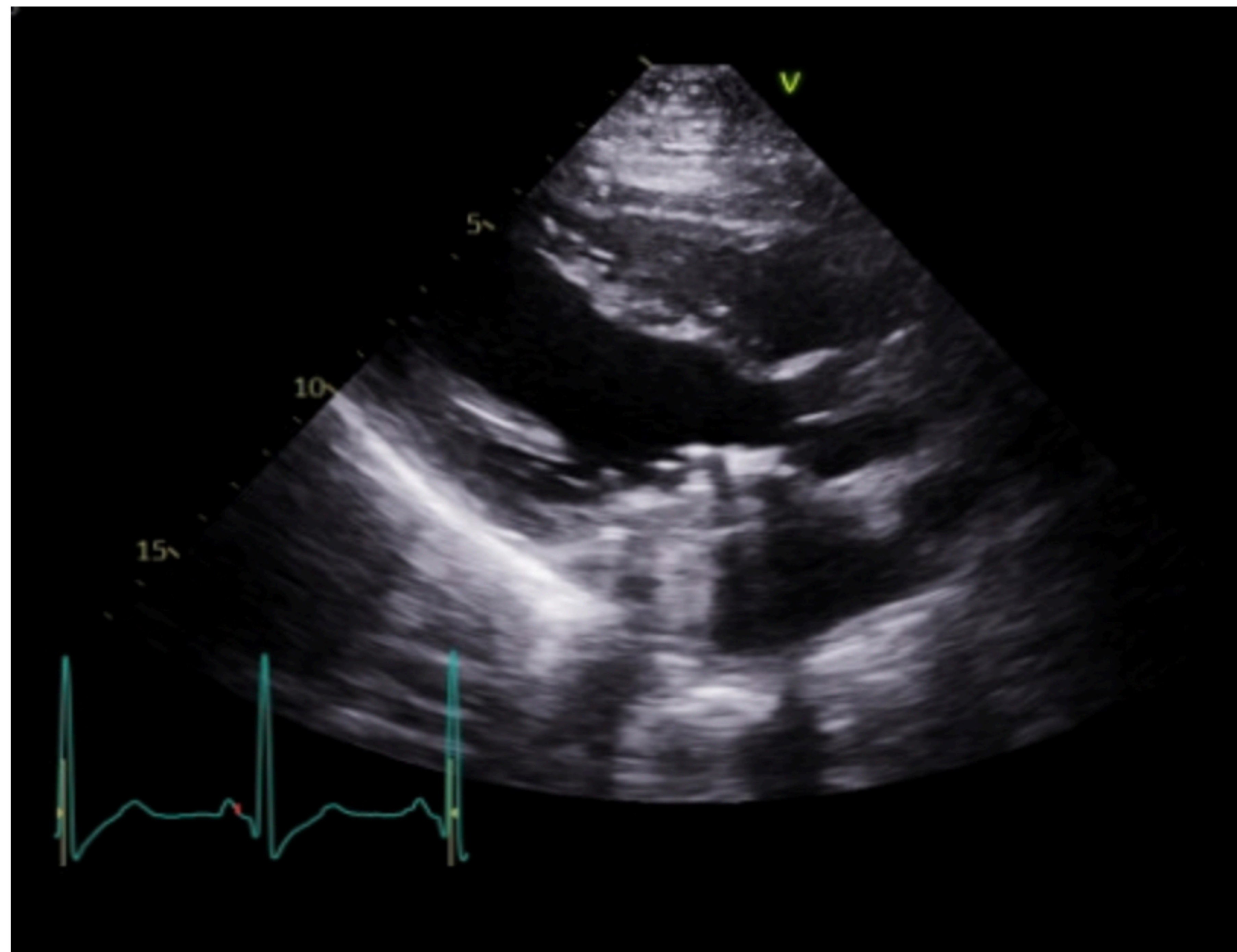


Figure 1: Transthoracic echocardiogram, parasternal long axis, showing mechanical valve in mitral position with washing jets evident.

Case Report

- History:
 - 32 year-old G4P1
 - Congenital mitral valve disease → severe MR
 - MVr → MVR in 2011
- Antepartum course:
 - Pre-pregnancy, was anticoagulated with warfarin
 - LMWH during pregnancy
 - TTE: well seated MVR, normal washing jets, MG 13
- Intrapartum course:
 - Presented for repeat cesarean delivery at 36 wks
 - Admitted 48h in advance for transition to UFH
 - CSE was placed:
 - 12 mg of 0.75% hyperbaric bupivacaine, 15 mcg of fentanyl, and 150 mcg of morphine
- Postpartum course:
 - UFH infusion was restarted 12 h post cesarean
 - LMWH was reinitiated 24 hours thereafter as a bridge to warfarin
 - d/c on PPD 4

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Discussion

- Multidisciplinary team is  especially for pts with mechanical mitral valves
- Delivery planning should include:
 - Feasibility of neuraxial anesthesia
 - Planned anticoagulant use
 - ⌚ of discontinuation of anticoagulation
 - ⌚ of re-initiation of anticoagulation PP
- Additional considerations in the event of bleeding
 - Uterotonic choice
 - Use of anticoagulant reversal

Criteria for neuraxial placement:

- > 24 hours since last dose of LMWH
 - > 6 hours since discontinuation of UFH infusion
 - Normal PTT

Learning Objectives

- Determine and discuss the essential components of the delivery plan in a parturient with valvular heart disease
- Discuss anticoagulation management during pregnancy including maternal and fetal risks
- Identify the recommended time interval for anticoagulation cessation and initiation to allow for performance of safe neuraxial anesthesia

References

- PMID [19221073](#)
- PMID 24498805

It is reasonable to offer most parturients with mechanical mitral valves neuraxial analgesia for labor and neuraxial anesthesia for cesarean delivery