

# Epidural Analgesia: Delivering with Aortic Stenosis

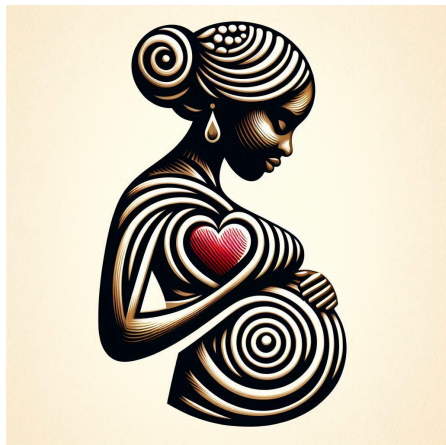


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## Background

1. Parturients with cardiac disease have higher-than-average mortality and is a leading cause of death
2. Bicuspid aortic valve is #1 reason for cardiac surgery in those of childbearing age.
3. AS:
  - a. Increases cardiac afterload due to a fixed outflow obstruction → delicate balance between cardiac output and mean arterial pressure.
  - b. Close monitoring and control of blood pressure and heart rate is necessary for parturients with AS - pain, anxiety, and contractions disrupt hemodynamic balance.

# Patient History and Case Report

23-year-old G2P0010 at 35 weeks 6 days with a PMH of bicuspid AV s/p repair with a bioprosthetic valve 7 years prior, presented to the labor and delivery unit for induction of labor.

- 1 year before the current pregnancy, TTE showed mild aortic regurgitation with normal LVEF
- During pregnancy:
  - TTE showed prosthetic valve degeneration, worsening AS, and a stably dilated ascending aorta
  - Developed symptoms of heart failure - palpitations, fatigue, tachycardia, and orthopnea

Plan to induce labor at 35 weeks after analgesia with a slowly loaded epidural

- During labor, pain due to fetal malpresentation. Additional doses of epidural bupivacaine given without relief.
- Given the incomplete pain control and tachycardia, the patient was taken for cesarean section under general anesthesia.
- Induction: Etomidate 14mg, succinylcholine 80

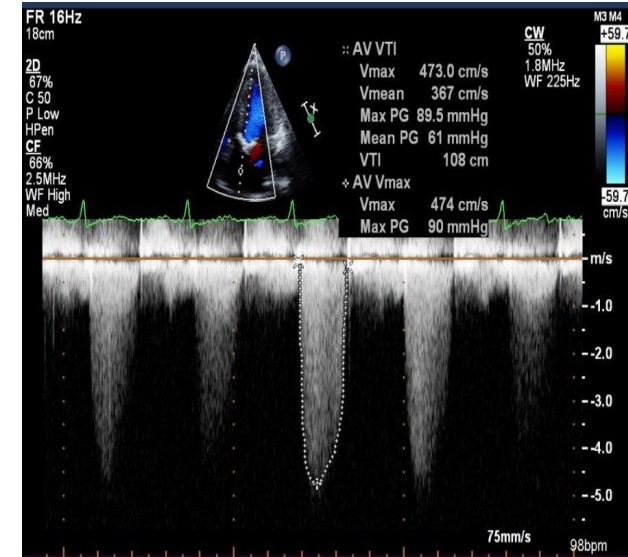


Image 1. TTE 1 week prior to deliver

# Discussion: Can Parturients with AS trial vaginal delivery?



- **Consensus opinion:** Neuraxial anesthesia is **contraindicated** with severe AS
- **In practice:** Several case reports of successful delivery with **epidurals** and **close hemodynamic** monitoring

Advantage of neuraxial anesthesia for labor = Reduced sympathetic tone

## **Conclusion:**

In this case it was the failure of the epidural to completely cover the pain of labor that prevented safe vaginal delivery.

## References

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