

Background

Delivery Management in Marfan Syndrome with Aortic Root Dilation and Failed Combined Spinal-Epidural

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Marfan Syndrome in Pregnancy

- Marfan syndrome (MFS) increases risk of cardiovascular complications in patients
 - Aortic dilation is most common and is a primary risk factor for aortic dissection [1]
- Pregnancy has been linked to 5-fold increase in aortic complication in MFS patients [2]
- Patients with aortic root (AoR) diameter >4.5cm are often advised to undergo aortic root replacement and/or avoid pregnancy altogether [3]

1. Cardiology. 2020;146(1):98-105
2. Int J Cardiol. 2009;136(2):156-161
3. Eur Heart J. 2018;39(34):3165-3241

Case

The Patient

28yo G1P1 with history of MFS with 4.6cm AoR dilation presented for scheduled CS at 37 weeks gestation

Prior delivery via vaginal forceps

- Patient had not experienced adequate pain relief with epidural

Combined Spinal-Epidural (CSE)

CSE was attempted at multiple levels with convincing loss of resistance

Unable to obtain cerebrospinal fluid flow with dural puncture

Epidural

Epidural catheter threaded and T4 level obtained with 2% lidocaine and fentanyl bolus

Patient had failed Allis test after draping

Patient then elected for general anesthesia

Intra- and Post-Operative Course

Arterial line employed with blood pressure remaining <130/90

Post-partum hemorrhage controlled with Pitocin bolus and hysterotomy closure

Discharged post-op day 4

Teaching Points

- MFS considerations
 - Failed neuraxial
 - Risk of dural ectasia provides possible explanation for epidural failure
 - Scoliosis can complicate neuraxial placement
 - Blood pressure monitoring
 - Important to avoid hypertension and tachycardia
 - Arterial line may be necessary
- This case demonstrates the importance of multidisciplinary management for delivery planning in a high-risk cardiac patient