Abstract # 66

**Anesthetic Management of a Parturient with Marfan Syndrome and Dural Ectasia**

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**Introduction:** Marfan syndrome presents unique challenges for obstetrical anesthesia. These patients carry increased risk of aortic dissection, and thus require profound analgesia to avoid aortic stress during labor and delivery. Current practice calls for these patients to receive neuraxial blockade. However, dural ectasia occurs commonly in Marfan syndrome patients and can be a relative contraindication to neuraxial blockade. We present a case of a parturient with Marfan syndrome, dural ectasia, and a persistent cerebrospinal fluid leak with need for profound labor analgesia.

**Case:** A 27-year-old primigravida with Marfan syndrome presented for anesthetic evaluation at 34 weeks gestation. Two years prior, she underwent lumbar puncture to rule out meningitis. Afterwards, she suffered from a persistent debilitating post dural puncture headache. Workup revealed dural ectasia and she was diagnosed with Marfan syndrome. She underwent two lower back surgeries to repair the dura, but the cerebrospinal fluid (CSF) leak persisted. Following cardiology evaluation, which showed normal aortic root size, we discussed risks and benefits of neuraxial anesthesia versus remifentanil patient controlled analgesia (PCA) with the patient. She chose to utilize remifentanil PCA for first stage labor with addition of bilateral pudendal blocks for second stage labor. Successful analgesia was achieved and her vital signs remained normal throughout labor and delivery.

**Discussion:** When providing anesthetic management for a parturient with Marfan syndrome, it is important to recognize the increased risk of a debilitating dural injury associated with placement of a neuraxial blockade. Risks of dural injury must be weighed against risk of increased aortic stress that could Result from inadequate analgesia. The prevalence of dural ectasia in Marfan syndrome patients is nearly 90%, and normally involves the lumbar and sacral areas. A literature review revealed a paucity of evidence describing the increased complication rate of neuraxial blockade in patients with dural ectasia. Likewise, the risk of aortic rupture or dissection during labor and delivery is difficult to quantify, since limited data exists in the literature. There is general agreement that risk increases at larger aortic root diameters, specifically greater than 40mm. Considering that most Marfan patients have dural ectasia, we may need to reconsider neuraxial blockade as the first choice of anesthesia for the Marfan syndrome parturient with normal aortic root size. Consideration should also be given to epidural placement with radiologic guidance in an effort to reduce risk of dural puncture in this unique patient population.

**References**  