Spinal anesthesia for Cesarean delivery in a patient receiving fondaparinux

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Introduction: Fondaparinux, a selective inhibitor of factor Xa, is a relatively new anticoagulant used for thromboprophylaxis and therapeutic anticoagulation in pregnant patients with a history of heparin induced thrombocytopenia or heparin allergy. There is no clear agreement on what interval of time should pass between the last dose of fondaparinux and the performance of spinal anesthesia in order to minimize the risks of both spinal hematoma and thromboembolism. We report the use of spinal anesthesia for cesarean delivery, without complications, in a patient 36 hours after her last dose of fondaparinux.

Case: A 32 year old female with a history of Factor V Leiden mutation and deep vein thrombosis presented for a scheduled repeat cesarean delivery. During previous treatment with heparin and enoxaparin severe itching occurred and she was started on warfarin for prophylaxis. When she became pregnant warfarin was discontinued and fondaparinux 7.5mg subcutaneously daily was prescribed. Physical exam revealed an obese (166 kg) female, with a possible difficult airway. We decided to proceed with spinal anesthesia 36 hours after her last dose of fondaparinux. Spinal anesthesia was performed using a midline technique with a 25 gauge Whitacre needle and a single pass at the L 3-4 intervertebral space. The patient had adequate surgical anesthesia and an uneventful delivery and recovery. Pneumatic compression devices were placed before surgery and continued until 24 hours postoperatively when anticoagulation was restarted. The patient did not have any evidence of venous thrombosis or neurological sequelae from the spinal anesthesia, and she was discharged on warfarin on the fourth postoperative day.

Discussion: Management of parturients on fondaparinux poses a significant challenge to anesthesiologists, as there is limited clinical experience with this medication. Our patient had multiple risk factors for thrombosis including factor V Leiden mutation, previous thromboembolism, obesity and cesarean delivery. Patients heterozygous for the Factor V Leiden mutation have activated protein C resistance and may have a 50-fold increase in their risk of venous thromboembolism during pregnancy, so continuation of the prophylaxis as long as safely possible prior to surgery is warranted. Our patient was on 7.5 mg subcutaneous fondaparinux daily, a dose intermediate between the 2.5 mg recommended for prophylaxis and the 10 mg recommended for treatment in patients over 100 kg, making it especially difficult to gauge a “safe” interval. A review of the recommendations from various professional organizations reveals no consensus on the ideal time interval between the last dose of fondaparinux and the performance of neuraxial anesthesia. If our experience can be generalized, an interval of 36 hours between the last administration of fondaparinux and performance of spinal anesthesia may be sufficient for safe performance of neuraxial anesthesia.