Unusual Subclinical Presentation of Uterine Rupture Following Vaginal Birth in a Jehovah Witness Patient

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Introduction: A trial of labor after a previous cesarean delivery carries an increased risk of uterine rupture. The VBAC rate has risen from 3% in 1980 to 28% in 1996, though it has been decreasing since that time to 8.5% in 2006 - due to increased liability concerns and obstetric coverage difficulties. Uterine rupture after attempted VBAC presents typically with non-reassuring fetal heart rate, severe abdominal pain and frequently with cardiovascular collapse. We report a case of VBAC complicated by concealed uterine rupture post delivery.

Case: 29 year old Jehovah’s Witness’ patient, G2P1001, with intrauterine pregnancy at 39 weeks admitted for induction of labor. Significant PMH included HIV and depression. PSH included one prior cesarean section. After induction and maintenance of labor with oxytocin (25 mU/min) and epidural analgesia (at 3-4 cm cervical dilatation), the patient delivered vaginally 14 hours later. During the last two hours of labor there were deep variable fetal decelerations and the baby was delivered with nuchal cord X 2 (Apgar score 2,7). A few minutes after delivery the patient complained of severe right shoulder pain followed by abdominal pain. Right upper quadrant abdominal tenderness was noted. Blood pressure decreased to 95/57 mmHg with diaphoresis and tachycardia 108-144/min.

Abdominal X-ray and US were performed and reported as negative. CT scan revealed diffuse free abdominal fluid with an area of high attenuation projecting from the right aspect of the uterus - suggesting recent or sub-acute hemorrhage. Based on the patient’s stability, the obstetricians initially pursued conservative management. Due to the lack of clinical improvement and after another review of CT, the patient was taken to operating room 16 hours after delivery for an exploratory laparotomy revealed a uterine rupture with 800mL of blood clot accumulated in the abdomen. Hysterotomy repair, right uterine artery ligation and bilateral tubal ligation was performed, under general anesthesia (RSI). Total estimated blood loss was 900 ml. Hemoglobin decreased from 11 to 7.1gm/dL on postoperative day #1. Blood transfusion was avoided as per patient’s request, and volume expansion given with lactated ringers and hetastarch. She was discharged home on postoperative day #4 in stable condition.

Discussion: Prior cesarean section is a significant risk factor for uterine rupture. The risk is directly related to the location/number of prior uterine incisions and increased in prolonged labor, and with oxytocin induction. Clinical presentation can vary (even presenting in the postpartum period), but usually presents as severe fetal compromise and a rapid onset of maternal hypovolemic shock. Despite a substantial uterine rupture seen at operative delivery, we report a subacute presentation post delivery (16 hours), with the added challenge of patient ethical restriction in potential blood product resuscitation (Jehovah Witness).