P-15

REGIONAL ANESTHESIA USE IN PARTURIENTS WITH FACTOR V LEIDEN MUTATION *Walsh, M.E. Harnett, M.J.; Tsen, L.C. Obstetric Anesthesia, Brigham and Women's, Boston, MA* Factor V Leiden is produced by a single point mutation of the gene coding for coagulation factor V and results in an increased propensity to form thrombosis. The prevalence is estimated to be 3-7% and may be as high as 15% in some selected groups(1).The risk of thrombosis in patients with this disorder increases further in the setting of pregnancy and has been associated with early pregnancy loss. Thromboprophylaxis is therefore frequently utilized to prevent both maternal complications and fetal loss. Despite the prevalence and importance of this condition, limited data exist on the hematologic, obstetric and anesthetic management of this disorder; of note, the use of anticoagulant therapies have serious implications for the provision of neuroaxial anesthesia. A 5 year (1996-2001) retrospective analysis of all parturients with Factor V Leiden was performed. Charts were analyzed for history of disease presentation, morbidity, and management during pregnancy. Peripartum hematologic, obstetric, and anesthetic management was recorded. Maternal and fetal morbidity and overall outcome was recorded. All patients (n= 17) had their disorder diagnosed prior to pregnancy. The major findings were: 1. 88% used low molecular weight heparin (LMWH) for thromboprophylaxis during pregnancy with a plan to change to subcutaneous heparin 2 weeks prior to a scheduled delivery. 2. 53% had a scheduled delivery 3. No patient was denied neuroaxial analgesia and no maternal or fetal morbidity or mortality resulted. Although our incidence is lower than other reports. Factor V Leiden represents a not uncommon entity, which can present a special risk during pregnancy. A multidisciplinary approach to pregnancy and labor and delivery management is necessary to limit maternal and fetal morbidity and mortality. Our results, review of available evidence, and collaboration with physicians with special, internationally recognized expertise in this coagulation disorder, assisted our development of a multidisciplinary protocol for the future management of these parturients at our institution. In terms of anesthetic management, we recommend: 1. All patients receiving LMWH within the previous 12 hours should have a heparin test (anti-Xa chromogenic assay) performed. If available, this test takes approximately 15 minutes. 2. A heparin test of less than 0.2 U/ml is most likely safe for the performance of neuraxial techniques. 3. When possible, a more experienced anesthetist should perform the neuraxial technique. *1. Price DT, Ridker PM. Factor V Leiden Mutation and the Risks for Thromboembolic Disease: A Clinical Perspective. Annals of Internal Medicine 1997; 127: 895-903.*

P-16

LEG TOURNIQUETS TO SEQUESTER BLOOD DURING C/S IN A JEHOVAH'S WITNESS WITH TWINS AND PLACENTA PREVIA *Easson, D.[1] Palmer, S.K.[2]* 1. Department of Anesthesiology, University of Colorado Health Sciences Center, Denver, CO; 2. Department of Anesthesiology, University of Colorado Health Sciences Center, Denver, CO A 22 yo Hispanic Jehovah's Witness, G3P2002, twin gestation, presented with painless vaginal bleeding at 33 2/7 weeks gestation. Ultrasound exam of the uterus revealed complete placenta previa. After discussion of risks/benefits of C/S, including the high probability of severe blood loss, the patient reaffirmed her decision to decline blood transfusion or blood products. Precautionary placement of uterine artery catheters was refused because of the risk to placental perfusion. The patient was taken to the OR, and finger stick hemoglobin (Hgb) of 12.8gm/Dl was measured. A combined spinal/epidural was placed at the L2-3 interspace. The patient was placed supine with LUD. Appropriate padding and bilateral tourniquets were placed proximally on the thighs. Brisk fluid administration was concurrent with the onset of her regional analgesia. After 30 minutes, a repeat Hgb=9.8gm/Dl indicated successful hemodilution. Analgesia to T3 was confirmed, surgery initiated, and the leg tourniquets were inflated to 250 torr just before the uterus was entered. Two vigorous baby boys were delivered within 6 minutes. Blood loss immediately post-partum was unstoppable, so supra-cervical hysterectomy was initiated. Hgb levels reached a nadir of 8.0 gm/Dl. Twenty minutes later the uterus was isolated and hemostasis achieved. The tourniquets were deflated and 15 minutes later Hgb 9.3 gm/Dl. The patient was alert,comfortable, and able to briefly cuddle her infants. She was discharged 3 days later with hematocrit =28%. Because the rapid blood loss phase was limited in time by hysterectomy, we were able to use leg tourniquets to isolate and protect some of this patient's red cell mass. Such a strategy has not been previously reported in the obstetric literature. Tourniquets have their own risks and benefits, with most risks proportional to the inflation pressures and length of application time. It is difficult to estimate the contribution of the thigh tourniquets to red blood cell conservation. Our attempts at pre-operative hemodilution were limited by the patient's unwillingness to have blood removed from her body, but aided by the onset of a high epidural block. Because we observed an increase in hemoglobin from 8.0 to 9.3 gm/dl after release of the thigh tourniquets, it appears that our strategy of acute hemodilution and brief sequestration of blood in the legs may have conserved blood during this procedure. Obstetric patients who do not agree to homologous transfusion, blood scavenging, uterine artery balloon catheter placements, or out-of-body blood storage may be helped by the brief use of limb tourniquets during the period of rapid blood loss.