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Identifying Parturients at Risk for Clinically Significant Gestational Thrombocytopenia

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Introduction: Gestational thrombocytopenia (GT) is a benign condition that occurs in up to 5% of pregnancies and is generally not associated with significant maternal morbidity. However in patients with GT, a platelet count of <100k may have clinical relevance during the decision making process to administer regional analgesia. Parturients have a mild to moderate reduction in platelet (PLT) counts during pregnancy, typically greater than 70k with two-thirds between 130-150k. While clinical factors exist to identify patient with thrombocytopenia secondary to preeclampsia, hemorrhage or ITP; GT typically occurs in otherwise healthy women. We sought to determine whether the standard assessment of platelet count in the early third trimester could be used to identify parturients at risk for clinically significant GT.

Methods: We identified parturients with GT from a database of parturients with thrombocytopenia <100k at delivery. Our database consisted of all patients delivered at the Medical University of South Carolina (1997-2007) and Brigham & Women’s Hospital (2004-2007). 95% confidence intervals for the risk of epidural hematoma were calculated using an exact binomial confidence interval. Non-parametric correlations were performed using Spearman’s Rho.

Results: Of 280 patients with thrombocytopenia <100k, 14.6% (n=41) were secondary to GT. The mean platelet count at delivery was 86±10 (Range 58-99). 26 of these patients (63%) had results available from their early third trimester platelet count. Of these, the platelet count was <150k in 92% (95% CI 75-99%). The mean platelet count during the pregnancy was 116±35 (range 71-235). There was no significant correlation between the early third trimester platelet count and platelet count at delivery (r=0.31; p=0.12). In the two patients with a platelet count >150k during pregnancy; the intrapartum platelet count was 83 and 96k. Of patients with GT 83% of patients received regional analgesia and regional analgesia was denied in only one patient (platelet count 69). No patient with GT had an epidural hematoma or other complication of thrombocytopenia.

Conclusions: While GT is a common cause of thrombocytopenia <150k, it is a relatively uncommon etiology of thrombocytopenia in parturients with platelets <100k. 92% of patients with a platelet count in labor of <100k were identified by a platelet count of <150 during their pregnancy. A platelet count is reasonable prior to regional analgesia in patients with a platelet count of <150 during prenatal care. Conversely, a routine platelet count prior to epidural analgesia is likely to be of poor utility in healthy women with a history of a normal platelet count prior to labor.