

Correspondence

Thromboelastography to assess coagulation in the thrombocytopenic parturient

To the Editor:

We present two cases in which pregnant women received a neuraxial block despite having a platelet count in the thrombocytopenic range. In our current practice, patients with platelet counts less than $100,000\text{-mm}^{-3}$ are not eligible for a neuraxial block. However, based on the normal thromboelastogram (TEG) tracing (Figure), the decision was made to proceed with neuraxial anesthesia.

Case 1

A 31-yr-old primigravida at term was admitted to labour and delivery in active labour with a platelet count of $61,000\text{-mm}^{-3}$. The results of a TEG were within the range previously reported for pregnant patients.¹ An epidural catheter was placed with ease and a patient controlled epidural infusion was started using 0.125% bupivacaine with $2\text{ }\mu\text{g}\cdot\text{mL}^{-1}$ fentanyl. Labour and delivery were unremarkable and she was discharged on the second hospital day. Her platelet count was normal ($178,000\text{-mm}^{-3}$) at the two-week postpartum follow-up visit.

Case 2

A 22-yr-old primigravida, 32 weeks pregnant, presented to labour and delivery with the diagnosis of hemolysis, elevated liver enzymes, and low platelets. Her platelet count was $56,000\text{-mm}^{-3}$. The patient was hypertensive with a blood pressure of 165/100 mmHg and a pulse rate of 65 $\text{beats}\cdot\text{min}^{-1}$. For maternal reasons the patient underwent a Cesarean delivery. Based on a "normal TEG" we decided to proceed with a neuraxial block. Postoperatively, the platelet count continued to decline with a nadir of $17,000\text{-mm}^{-3}$ for which the patient received one platelet apheresis unit. Symptoms improved and she was discharged on postoperative day four, at which time her platelet count, liver function tests, and blood pressure were normal.

A repeated topic of discussion has been whether a laboratory abnormality alone, such as thrombocytopenia without a positive bleeding history, should preclude a patient from receiving a neuraxial block. Recently, thromboelastography has been reevaluated for clinical use.^{2,3} This test will identify global abnor-

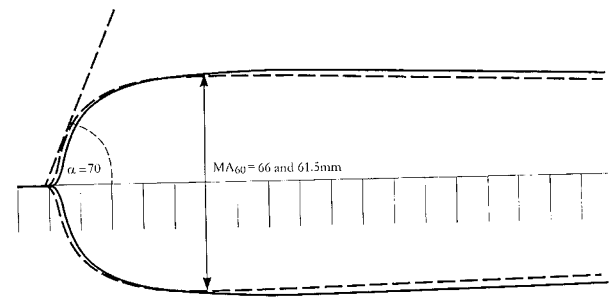


FIGURE Thromboelastogram tracings, solid line, thromboelastography result of case one, and dotted line, thromboelastography result of case two. Reference ranges: α -angle: 55–62; MA_{60} : 45–53.

malities in the coagulation system including alterations of platelet number and function. In both cases presented here, TEG tracings were indicative of hypercoagulability (high maximal amplitude and large α -angle). No single coagulation test has been established as a reliable predictor of epidural or spinal hematoma after neuraxial block. However, a normal TEG tracing may be utilized as laboratory evidence to support the clinical impression of normal coagulation and the decision to conduct a neuraxial technique.

Michael A. Frölich MD DEAA
Gordon Gibby MD
Michael E. Mahla MD
Grainesville, Florida

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