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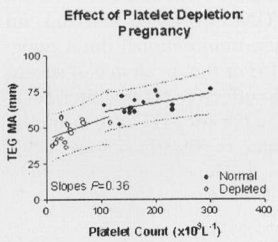
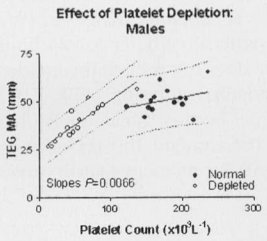
THROMBOCYTOPENIA AND PREGNANCY: A COMPARATIVE IN VITRO STUDY Gorton, H.[1]; Lyons, G.[2]; Warren, E.[1]; Columb, M.O.[3] *1. Anaesthesia, Leeds General Infirmary, Leeds, United Kingdom; 2. Obstetric Anaesthesia, St James's University Hospital, Leeds, United Kingdom; 3. Anaesthesia, Withington Hospital, Manchester, United Kingdom* Pregnancy is associated with the apparent paradox of thrombocytopenia and hypercoagulability. Thromboelastography (TEG®) has been used to compare platelet count with platelet function using an in vitro model to produce low platelet counts1. The aim of this study was to investigate platelet function at low counts in pregnant women. After Ethics Committee approval and informed consent, we took 7 mL blood from 15 ASA I men and 15 ASA I pregnant women at term. The blood was placed into two citrated tubes. One sample was centrifuged at 3000 rpm for 5 minutes. The platelet plug was removed from the sample and red cells and plasma were reconstituted. Platelet rich and platelet poor samples were analysed. Platelet count was performed using a coulter counter and platelet function was measured using TEG® on recalcified samples. The results were analysed using analysis of covariance (ANCOVA). The graphs show 95% prediction intervals for the two groups. In the male group, the slopes of rich and poor samples are significantly different (P=0.0066). In the rich samples, platelet function is better in pregnant women than men. In the poor samples, the decline in platelet function is more rapid in men. Pregnancy enhances the function of normal platelets at low platelet counts. Even at very low counts, platelet function in the pregnant samples is never below the lower limit of normal for male volunteers. **Reference:** 1) Warren E et al. Eur J Anaesthesiol 2000; 17S19: A 498





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EVALUATION OF PLATELET FUNCTION IN THE PARTURIENT USING THE PLATELET FUNCTION ANALYZER (PFA-100®). Nair, A.[1]; Arnold, I.[1]; Goolie-Scindain, J.[2]; Bodian, C.A.[3]; Hossain, S.[3]; Beilin, Y.[1] *1. Anesthesiology, Mount Sinai School of Medicine, New York, NY; 2. Nursing, Mount Sinai School of Medicine, New York, NY; 3. Biomathematical Sciences, Mount Sinai School of Medicine, New York, NY* **Introduction:** Thrombocytopenia is the most common hematologic disorder in pregnancy. Evaluating platelet function and the safety of neuraxial anesthesia in the presence of thrombopathy is difficult with current available technology. The platelet function analyzer (PFA-100®) rapidly and easily evaluates platelet function in citrated whole blood. The system simulates in vivo hemodynamic conditions of platelet adhesion and aggregation as found in a vascular lesion. It evaluates the ability of platelets to occlude an aperture in a membrane coated with collagen and either epinephrine (EPI) or ADP. The results are reported as Closure Time (CT) in seconds. This phase of the study was designed to study the distribution of the CT of the PFA-100® in the healthy parturient. **Methods:** After IRB approval, platelet function was evaluated in 100 healthy parturients with a platelet count > 150,000·mm-3 at term with the PFA-100® using 2 cartridges, CEPI and CADP. **Results:** The mean platelet count was 228,000·mm-3 with a standard deviation of 54. The results of the PFA-100® are described in the Table. **Discussion:**: We have defined the normal values for the PFA-100® in the healthy parturient. In the next phase of the study we plan to determine the usefulness of the PFA-100® in pregnant women with thrombocytopenia and preeclampsia. The study was supported in part by Dade Behring

Cartridge	Mean CT (sec)	Standard Deviation	Median CT (sec)	Range (sec)	5th Percentile	95th Percentile
CEPI	144	37	136	98–256	101	230
CADP	102	20	98	65–174	77	141

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EFFECT OF EPIDURAL ANALGESIA ON THE H-REFLEX Vidovich, M.I.; Wong, C.A.; Nishida, T. *Anesthesiology, Northwestern University Medical School, Chicago, IL* **Introduction:** The muscle-stretch reflex is frequently used during labor to monitor magnesium therapy in parturients with pre-eclampsia. The H-reflex is attenuated in non-pregnant patients with epidural anesthesia (1). The effect of epidural analgesia (with a dilute concentration of local anesthetic) on the H-reflex has not been investigated in healthy or pre-eclamptic parturients. The purpose of this study was to determine the effect of low-dose epidural analgesia on the H-reflex in healthy parturients. **Methods:** Five healthy, term, parturients consented to participate in this IRB approved study. Serum magnesium level was determined. The H-reflex (latency and amplitute) was determined at baseline (during early labor) and 30 min after the initiation of epidural analgesia with bupivacaine 0.06% and fentanyl 2.0 μg/mL - 20 mL. A paired t-test was used to compare H-reflex variables before and after epidural analgesia. **Results:** The serum magnesium level was 1.8 ± 0.2 mg/dL (mean ± SD). The muscle stretch reflex at the ankle was +1 or +2. Sensory level to cold was T10 to S1 (median values). There was no difference in the H-reflex latency and amplitude at baseline and after epidural analgesia (Table). **Conclusion:** Epidural analgesia with dilute concentration of local anesthetic does not effect the H-refex. **Reference:** 1. Zaric D, Larsson P, Axelsson K, et al. Anesth Analg 1994;78:495–500

	Latency (ms)	Amplitude (mV)
Baseline	29.4±2.2	8.1±0.2
Epidural Analgesia	29.5±1.7	8.9±3.3

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