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## Changes in some haemostatic parameters in pregnancy and puerperium in Port Harcourt

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**Introduction:** This was a cross-sectional study carried out in Braithwaite Memorial Specialist Hospital, Port Harcourt with the aim of determining the changes in some haemostatic parameters in pregnancy and puerperium.

**Method:** A total of four hundred (400) apparently healthy women of reproductive age, which consisted of 200 (40%) pregnant women and 200 (40%) puerperium mothers constituted the subjects in this case-controlled study. One hundred aged-matched non-pregnant women served as controls. The study was carried out between March, 2012 and January, 2014. The ages of the subjects ranged from 16 to 41 years (mean  $27.4 \pm 4.3$  years). Platelets count was carried out as described by Bain and Seed, PT and (PTTK) by Quick's methods while modified Clauss method was used in the determination of fibrinogen concentration.

**Result:** The pregnant women had significantly lower values of platelet count,  $203.89 \pm 65.2 \times 10^9/L$  (range, 78-416) as compared to  $257.0 \pm 69.0 \times 10^9/L$ , (range, 90-396  $\times 10^9/L$ ), for the non-pregnant controls and the  $249.1 \pm 75.0 \times 10^9/L$ , (range, 95-406  $\times 10^9/L$ ) of the puerperium women ( $F=28.437$ ;  $p<0.05$ ). The prevalence of thrombocytopenia among the pregnant, puerperium mothers and non pregnant control women were 53 (26.5%), 15 (7.5%) and 12 (12.0%) respectively. The mean prothrombin time (PT) of the non-pregnant control women  $15.48 \pm 2.49$  seconds (range, 14-16 seconds) was significantly higher than the mean prothrombin time of the pregnant and the puerperium women  $11.36 \pm 3.12$  seconds (range, 10-16 seconds) and  $14.28 \pm 4.22$  seconds (range, 13-16 seconds) respectively ( $F=57.843$ ;  $p<0.05$ ). The International Normalized Ratio (INR) of the pregnant women as compared to the non-pregnant and puerperium women were not statistically significant ( $F=2.206$ ;  $p>0.05$ ). The mean partial thromboplastin time with Kaolin (PTTK) of the pregnant women,  $44.1 \pm 7.2$  seconds (range, 43.3-46.1 seconds) were significantly higher than the mean partial thromboplastin time with Kaolin (PTTK) of the non-pregnant women,  $39.4 \pm 8.1$  seconds (range, 38.4-44.3 seconds) and the puerperium women,  $40.32 \pm 6.4$  seconds (range, 41.3-43.3 seconds) ( $F=20.512$ ;  $p<0.05$ ).

**Conclusion:** The mean fibrinogen concentration,  $4.4 \pm 0.80$  g/L (range, 2.9-5.1 g/L) of the pregnant women were significantly higher than the mean fibrinogen concentration,  $3.6 \pm 0.88$  g/L (range, 2.8-4.4 g/L) of the puerperium women and the non-pregnant control women,  $2.6 \pm 0.72$  g/L (range, 2.6-4.3 g/L) ( $F=164.877$ ;  $p<0.05$ ). The results point towards a hypercoagulable state in pregnant women, which is normal during pregnancy.

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