

**ORAL**

**CMS 008**

**HAEMOSTATIC ACTIVITY IN WOMEN FOLLOWING NORMAL VAGINAL  
DELIVERY**

**BY**

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**BACKGROUND OF STUDY:** Pregnancy is a risk factor for venous thrombosis and the incidence of venous thromboembolism during normal pregnancy is 6-fold higher during pregnancy than in the general female population of child-bearing age. When blood vessel injury occurs, physiological haemostasis serves to maintain the integrity of the circulatory system however, the process can become imbalanced leading to significant morbidity and mortality. During normal vaginal delivery, a significant number of women do have post partum haemorrhage (PPH) which may predispose them to having consumptive coagulopathy and death. This work is therefore aimed at assessing haemostatic changes in normal vaginal delivery which may predispose them to having consumption coagulopathy.

### **SUBJECTS AND METHODS**

The participants used for this study were post-partum women at puerperium (test) and apparently normal pregnant women which served as controls. They were recruited from the University of Benin Teaching Hospital and Saint Philomena Catholic Hospital, Benin City. Patients with a history of Haemophilia, known hypertensive, pre-eclampsia, eclampsia, bleeding disorders and those undergoing heparin therapy were excluded from this study. A total of 66 participants were used for this study. Ethical approval was obtained from the university of Benin teaching Hospital. Platelet count was manually counted by making a 1-20 dilution of blood sample with ammonium oxalate solution and counted using the Neubauer counting Chamber. Prothrombin time (PT) and prothrombin time test with Kaolin (PTTK) were done using commercially purchased Reagent kits while fibrinogen concentration was performed using the Ingram dry clot weight method Data obtained were subjected to statistical analysis using mean, standard error of mean and student's t-test at a level probability of 95% ( $p < 0.05$ )

In pregnancy a lot of changes do occur in haemostasis all leading to maintaining placental function and to prevent haemorrhage during and after delivery. Excessive bleeding after delivery remains one of the major causes of maternal mortality. It occurs in fewer than 5% of all deliveries and accounts for approximately 15% of all maternal deaths. Early postpartum haemorrhages occurs within the first 24 hours postpartum. In this study platelets was observed to be significantly reduced in the test subjects when compared to the controls ( $p=0.033$ ). this could be attributed to haemodilution of red cells caused by the increase in plasma volume during pregnancy. Platelets were observed not to have a significant reduction ( $p=0.063$ ) in the age bracket 26-30 years although the counts were lower in test when compared to the controls.

It was observed in this study that prothrombin time (PT), partial thromboplastin time with Kaolin (PTTK) and the international normalized ratio (INR) did not show any significant difference between tests and controls and across the different age groups. This could be attributed to the increase in the production of some coagulation proteins during pregnancy which generally serves a protective measure to prevent excessive bleeding during pregnancy, delivery and after delivery. Fibrinogen concentrations was observed to increase significantly in test when compared to the controls ( $p=0.002$ ) and this increase was also observed among the various age groups. This is in line with earlier researches that also observed an increased in Fibrinogen concentrations in postpartum periods. This may be attributed to increase in the production of coagulation factors/ proteins during pregnancy in readiness in cases of an abnormal bleeding after delivery. A lot of changes do occur in haemostas after delivery and this include a decrease in platelet count and an increase in Fibrinogen concentration which may predispose one to increased risk of thromboembolin.

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