Summary and Conclusion

The aim the study is to investigate by means of flow cytometry using a panel of activation markers the extent of platelet activation in normal pregnancy and whether this activation is more extensive during preeclampsia or not.

Our study was conducted on two groups of females;
Group I: pre-eclamptic patient in third trimester.
Group II: Normotensive – third trimester pregnant female.
By flow cytometry, we investigate for the following markers.

- Anti CD61; pan platelet marker, for gating of platelets in the three-colour analysis (Per CP) .
- PAC-1; Monoclonal antibodies against fibrinogen receptor conformation of glycoprotein IIb /IIIa complex (fluorescein isothiocynate) (FITC)
- Anti CD62; (P-selectin, (Phycoerythrin) (PE)
- Anti CD63; GP52,lysosomal secretion.(FITC)
- Anti CD31 (PECAM-1); GPIIIa platelet endothelial cell adhesion molecule-1(FITC).

The result of our study showed that: In platelet activation analysis: all markers increased in pregnant and preeclamptic patients specially CD62, CD63 which are statistically significant. In fluorescence intensities analysis: all markers increased in pregnant and preeclamptic patients but not statistically significant.

In conclusion: our study demonstrates that platelets circulate in an enhanced activation status in some normotensive pregnant women. The platelet activation status is more enhanced and present in all pre-eclamptic women as evidenced by the increased expression of P-selectin and CD63. The two separate analysis of the flow cytometric data indicates that in general only a subpopulation of the platelets has an enhanced activation status in the pre-eclamptic patients.