**EFFECT OF DABIGATRAN ON PLATELET REACTIVITY-A PROOF OF CONCEPT STUDY**

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*Background*: Dabigatran is a new oral anticoagulant, a direct thrombin inhibitor approved for use in non-valvular atrial fibrillation and pulmonary embolism management. It was associated with statistically non-significant increase in risk of MI in several trials. Previous study showed that thrombin receptor- activated peptide (TRAP) mediated platelet aggregation is less with both dabigatran and warfarin, but there was less inhibition of platelet aggregation by dabigatran compared to warfarin. To our knowledge no study has reported the effect of dabigatran and warfarin on platelet reactivity unit (PRU) values assessed by point of care VerifyNow P2Y12 test.

*Objective*: We hypothesized that the trend towards increased MI events in patients receiving Dabigatran could be due to an increase in platelet reactivity as measured by the VerifyNow P2Y12 test.

*Methods*: This is a proof of concept study. We enrolled 40 patients who have been on dabigatran or warfarin for at least 6 months into one of the two study arms: Dabigatran arm or Warfarin arm. Platelet reactivity was measured by Accriva’s VerifyNow device and the PRU values were recorded. Analysis was done using Student t-test.

*Results*: The mean PRU value in Dabigatran group was 222.4 with SD of 35.19.The mean PRU value in Coumadin group was 235.25 with SD of 34.49. T value was 1.498.Two-tailed P value was 0.25 with 95 CI ranging from -35.47 to 9.77.

*Conclusion*: Platelet reactivity assessed by VerifyNow did not differ in the two groups. These findings do not explain the observed trend in increased events of MI in the large clinical trials with dabigatran.