ABSTRACT
COMPARATIVE STUDY ON ESTIMATION OF ACENOCOUMAROL LEVELS IN BLOOD IN PATIENTS WITH EXTREMES OF INR VALUES AND NORMAL INR VALUES AFTER VALVE REPLACEMENT SURGERY

INTRODUCTION

Acenocoumarol is the commonly used vitamin K antagonist that have a narrow therapeutic index and acenocoumarol relationship between dose and response is un-predictable. Large inter individual variation in response to acenocoumanol, leads frequent estimation of the international normalized ratio. The major side effects of oral anticoagulation is complications due to bleeding even when INR values are within the therapeutic range. Therapeutic drug monitoring of acenocoumarol levels in blood is essential to provide optimal dosage to prevent sub-therapeutic/ supra-therapeutic drug therapy which can lead to lifethreatening complications in patients with mechanical heart valve replacement

AIM
To study the association between plasma concentration of acenocoumarol at the trough and Cmax levels with INR values in patients who have undergone valve replacement.

METHODOLOGY
After IHEC approval 56 patients were enrolled in to the study. Participants who are taking acenouumarol 2mg with low INR, normal INR and high INR was included. Blood samples were taken for estimation of Trough and Cmax concenrations by HPLC method. Statistical analysis was done.

RESULTS
1. There was no correlation between INR and plasma concentration of acenocoumarol taken at trough and Cmax level. (P value > 0.05)
2. The plasma concentration of acenocoumarol (trough and Cmax) was not significantly different among the three groups of participants (P value > 0.05)
CONCLUSION

1. We can conclude that measuring INR alone, will have limited value for dose adjustment of acenocoumarol as proved by other studies for warfarin.
2. Hence estimation of plasma concentration of acenocoumarol will be ideal and appropriate for the dose adjustment of acenocoumarol.