**CARDIOPROTECTIVE EFFECT OF ETHANOLIC EXTRACT OF TERMINALIA ARJUNA BARK IN ADRENALINE INDUCED MYOCARDIAL DAMAGE IN RATS**

M. Rahaman, **Z. Begum**

Ex- Department of Pharmacology, Dhaka Medical College, Dhaka, Bangladesh

Objective: To find out the cardioprotective effect of Terminalia arjuna bark in adrenaline induced myocardial damage in rats.

Background: In Bangladesh cardiovascular disease is the leading cause of mortality and morbidity. Medicinal plants constitute an important natural wealth of a country. Terminalia arjuna has long been used in traditional medicine as a cardiotonic easily available in Bangladesh.

Method: Total 54 long Evan Norwegian rats were taken and divided into nine groups. Myocardial ischemic damage was induced by two doses of injection adrenaline 2mg/Kg subcutaneously 24hours apart. Ethanolic extract of Terminalia arjuna (TAEE) at doses 3.45, 6.75 and 9.75 mg/Kg body weight were treated 6days a week for four weeks in experimentally induced ischemic rats to demonstrate the effect on serum creatine phosphokinase-MB(CK-MB) and aspartate aminotransferase (AST) and myocardium. Results: TAEE did not produce significant change in serum CK-MB and AST level as compared to control (P>0.1) and histological features of rat heart exhibit no lesion in normal rats.Adrenaline injection produces highly significant(P<0.001) rise in serum CK-MB and AST level 18 hours after the 2nd injection and histological features of rat heart shows marked ischemic changes and grossly increase in heart weight .All the doses of TAEE reduced the increase serum CK-MB and AST level, but at dose 3.45mg/Kg body weight very significantly reduced. Histologically heart lesion was prevented in all TAEE treated rats and grossly increase heart weight also prevented.

Conclusion: This study provides a rationale use of Terminalia arjuna in development of a new drug, needed for prevention of myocardial ischemia.