

**TITLE:****STUDY OF RELATIONSHIP BETWEEN GLYCEMIC STATUS AND QTc INTERVAL IN ECG AMONG TYPE II DM PATIENTS****ABSTRACT****BACKGROUND:**

Patients with Type II DM are at increased risk of dying from cardiovascular disease. Elevated cardiovascular risk in this population persists in this population even after the other conventional cardiovascular risk factors are eliminated or reduced suggesting that there are other incompletely understood mechanism which are increasing cardiovascular risk in such patients. Ventricular instability such as that observed in QTc abnormalities may be an important additional mechanism. QT prolongation has been shown to predict cardiac death in Type II DM.

**AIMS AND OBJECTIVES:**

The aim of the study is to assess the relationship between the glyceemic status and QTc interval in ECG among patients with Type II DM.

**MATERIALS AND METGHODS:**

The total number of the subjects in this study is 100. Ther are 100 known diagnosed Type II DM cases are taken from the medicine department in Tirunelveli medical college hospital.

**INCLUSION CRITERIA:**

Patients with Type II DM on regular follow up in diabetic op of TVMCH, Tirunelveli.

**EXCLUSION CRITERIA:**

Patients with any of the following illness are excluded from this study such as SHT/CHD/CAD/IHD/MI/Unstable angina/Anemia/any acute illness conditions/CRF/Intake of beta blockers, beta agonists, CCB and digitalis like drug intake, smokers and chronic alcoholics also excluded from this study.

**DISCUSSION:**

In Type II DM patients, hyperglycemic status leads to ventricular instability and cause QTc prolongation by the following ways. It may cause increased sympathetic activity. It may increase cytosolic calcium content in myocytes. By raising the production of free radicals, high glucose may reduce nitric oxide availability to target cells including a state of increased vasomotor tone and ventricular instability. Reduction of Na<sup>+</sup>/K<sup>+</sup>-ATPase activity, inhibition of Ca<sup>+</sup>-ATPase activity, depressed Na<sup>+</sup>/Ca<sup>+</sup> exchanger activity, and activation of Na<sup>+</sup>/H<sup>+</sup> antiport may all be implicated.

And also in Type II DM, hypoglycemic status (may be hyper insulinemic state also leads to hypoglycaemia and hypokalemia)sympathoadrenal activation causes release of high levels of circulating catecholamines, this may increase the risk of precipitating arrhythmias and cause cardiac arrest and finally death may occur.

**KEYWORDS:**

QTc interval, Type II DM, Hyperglycemia, Hypoglycemia.