SUMMARY

Neonatal respiratory distress is a major topic of neonatal research ,however, no clear cut physiologic parameter exists which enable an early identification of patients who are either at risk to develop myocardial injury.cardiac abnormalities in neonatal respiratory distress are often under diagnosed and require a high index of suspicion.ECG,Echo and measuring CK-MB isoenzyme activity help within limit in early recognition and better management of these cases.

Troponin I (TnI), an inhibitory protein complex located on the actin filament of cardiac muscle, has become a specific marker of myocardial damage. **(Bhavsar PK.,1991)** Troponin has been studied in a wide range of clinical settings. However, many questions are still unanswered, especially in preterm neonates with the most common pathology at birth, such as idiopathic respiratory distress syndrome (IRDS). Cardiac troponin I (cTnI) is structural proteins that acts to regulate muscle contraction it is released into the bloodstream from injured muscle cells during cardiac ischemia with no overlap with skeletal muscle troponins(**Adams JE, Bodor GS, 1994)** Multiple studies have demonstrated that cTnI is important prognostic indicator in newborn infants presenting with respiratory distress, even when creatine kinase (CK), MB fraction is not elevated. **(Anderson PA, 1991)** Previous reports suggested that cardiac troponin I concentration in the cord blood of neonates is unaffected by gestation, birth weight, and sex. Furthermore, increases in

cardiac troponin I in the cord blood were found to independently predict the development of respiratory distress syndrome **(clark , 2002).**

This study was conducted in the NICU of Banha university hospital. This study included 60 preterm neonates (32 male and 28 female). Their gestational age ranged from (29 weeks to 36 weeks), the studied cases were divided into two groups :

-Group (1) included 15 of healthy preterm.

-Group (2) included 45 of preterm with R.D which classified into 3 subgroups.

Subgroup (a) included 15 cases with mild R.D.

Subgroup (b) included 15 cases with moderate R.D.

Subgroup (c) included 15 cases with severe R.D.

All studied neonates were subjected to:

(1) full history taking

-mode of delivery - birth trauma - mother illness

- assessment of gestational age according to Daubwitz score

(2) full clinical examination

-neurological examination - chest examination

-heart examination - abdominal examination

(3) full investigation: cases and their control will be investigated by.

-CBC. –ABG - serum troponin I -ECG

- chest x ray.

(4) Determination of serum level of troponin I (TnI) by the immulite LKT1-117

pincipale of the procedure: immunometic assay.