Summary

Respiratory distress syndrome is one of the most common causes of respiratory distress in newborn.

In preterm infants with respiratory distress syndrome (RDS), cardiac function is negatively influenced by the severity of the lung disease, cardiac troponin T (cTnT), which is an inhibitory protein complex located on the actin filament in all striated muscle and consist of three subunits T,C, and I. is a biochemical marker of myocardial injury, its high concentration in preterm infants with RDS suggest the presence of myocardial damage in this group patients.

In this study we used cardiac troponin T as a biochemical marker to detect myocardial injury in infant with RDS. This study included 50 preterm neonates (28 male and 22 female). Their gestational age ranged from (28 weeks to 36 weeks) and their weight ranged between (1500gm to 2900 gm) they were divided into two groups:

The 1st group: will include 10 cases of healthy preterm neonates who do not have respiratory distress.

The 2nd group: will include 40 cases of preterm neonates with respiratory distress syndrome.

Were we found there was no statistical significant correlation between troponin T level (TnT) level and sex distribution, P. value 0.870.

There was no statistical significance correlation between TnT level and gestational age, P. value 0.098.

There was no statistical correlation between TnT level and the body weight, P. value 0.129.

There was no statistical significant correlation between TnT level and maternal age, P. value 0.911.

There was no statistical significant correlation between TnT level and mode of delivery with P. value 0.535.

There was no statistical significant correlation between the level troponin T and CBC (P. value are 0. 157 for Hb level, 0.937 for RBCs count, 0.404 for leucocyte count and 0. 512 for platelet count).

There was high statistical significance negative correlation between TnT level and with arterial blood PH with P. value 0.001 and with arterial blood O_2 with p. value 0.013 and with arterial blood CO^2 with P.value 0.001 and with arterial blood HCO^3 with P. value 0.001 among group2.

There was high statistical significance increased of TnT level (ng/ml) among RDS infants, group 2 infants with P.value < 0.001 and this indicate that there is myocardial affection among group 2 due to RDS. This results may show that TnT is a good marker for myocardial ischemia and as marker for diagnosis of RDS in neonates.

Also we found a significance difference in cardiac troponin T level between infants with and without respiratory distress.