SUMMARY

Ammonia is the product of the Catabolism of amino acids which is highly toxic to the central nervous system.

The measurement of plasma ammonia is an important screening investigation for any critically ill infants.

The most common cause of neonatal hyperammonemia is transient hyperammonemia of the newborn (THAN) and inherited urea cycle defects. The true incidence of hyperammonemic condition in general population is unknown as many infants probably die before a diagnosis is made.

The increase awareness of THAN in recent years had led to an increase in its diagnosis because THAN is more common than inherited urea cycle defects.

Plasma ammonia level should be repeated whenever a raised concentration is reported because even mild hyperammonemia could be a pointer to metabolic diseases.

Our study included 50 preterm neonates (23 male and 27 female) their gestational age ranged from 28-36 wks and their weight ranged from 600-2660gms they were divide into two groups:-

-Group I: included 10 healthy preterm neonates as control group.

-Group II: included 40 cases of critically ill preterm neonates suffering from RDS or neonatal sepsis.

Our study revealed that the mean plasma ammonia level in preterm infants is (87.48 ± 37 uMMol/L).

We found that there is no statistical significant relation between plasma ammonia level and gestational age, birth weight, sex distribution, Apgar score, type of feeding. And degree of respiratory distress. While there is statistical significant relation between plasma ammonia level and ***ALT***, ***AST***. With ***P*** value 0.7 and ***CRP*** with ***P*** value 0.4.