Summary and Conclusion

This study was conducted on fifty full term non-circumcised, male neonates with neonatal jaundice .Ten full term ,circumcised non-jaundiced male were chosen as control group. They were selected from the neonatal unit in Menshawy Hospital at Tanta and Benha University Hospital.

The study period was from September 2010 to May 2011.

Newborns who were excluded were those above 2 weeks of age. Those with bilirubin levels < 15 mg %,those neonates showed jaundice in the first 24 hrs with signs of hemolysis and newborns with fever and signs of sepsis.

Complete obstetric history taking, thorough clinical examination was performed, and the following investigations were done: Blood samples were taken from all the neonates and their hemoglobin (Hb), haematocrit (Hct), differential leucocytic count, reticulocytic count, maternal and neonatal blood group and RH factor, bilirubin (direct and total), and Coomb's test were evaluated. Urine analysis and urine culture were performed on specimens obtained by bag, if bacterial count $\geq 10^5$ the result was considered as positive UTI. Pyuria was defined as > 5 white blood cells / HPF.

The results of the present study showed that eight of the fifty neonates(%16) had positive urine culture. There was no statistically significant difference between the positive(infected) and negative groups(non infected) as regards age, gestational age, mode of delivery, birth weight and onset of jaundice.

The majority of the studied cases and control were in the age group 4-7 days 64% of the studied cases(32neonates) were delivered by N.V.D., while 36

% (18 neonates) were delivered by C.S. All of the neonates were ≥37 weeks gestational age.

In this study 94% of the studied cases(47neonates) had irrelevant family history except for three neonate(3%) who had a positive family history of neonatal jaundice in a previous sibling.

The comparison between the cases of UTI & negative ones regarding history of maternal infections showed that 6 out of 8 neonates (75%) had positive history of neglected maternal infections uncovered with antibiotics among the infected group. While only 14 out of 42(33.4%) non infected neonates had positive history of neglected maternal infections with statistically significant difference between the two groups .

Regarding the causative organisms, 75% (2 neonates out of 8) had *E. coli* infection while 25% (2 neonates out of 8) had klebsiella infection.

Regarding pyuria this study showed, no statistically significant difference between infected and non infected groups as regards urinary pus cells. Hence, pyuria is not always evident in newborns with UTI. Non of the neonates had significant microscopic hematuria.

This study shows that there is a statistical significant difference among cases of UTI and cases without UTI regarding mean of decrease in bilirubin/24 hrs and mean duration of phototherapy .On the other hand there was no statistically significant difference could be detected between both groups as regards TSB, DSB and blood group.

As regards hematological findings this Study shows that neutrophils were higher among the infected group compared to non infected which suggests that

infants with a UTI can be diagnosed before signs become evident, while reticulocytes were higher among non infected group.

The results of the present study showed that there is significant positive correlation between direct bilirubin fraction versus WBCs count among the positive group . On the other hand no statistically significant correlation could be detected between the direct bilirubin fraction and WBCs count among the negative group.

The results of this study showed that there is a strong correlation between UTI and unexplained jaundice. Such findings should raise an important question about the value of testing for a UTI as a part of the diagnostic evaluation of asymptomatic jaundiced infants.

Also, another important question is raised here and should be evaluated in future related studies and that is whether prolonged jaundice is the result of UTI or UTI is the result of jaundice due to decreased bactericidal action in the sera of jaundiced neonates resulting from a functional defect in the complement system.

The results of the present study showed that there is a strong correlation between UTI and unexplained jaundice. Such findings should raise an important question about the value of testing for a UTI as a part of the diagnostic evaluation of asymptomatic jaundiced infants.

In conclusion UTI was very common in asymptomatic jaundiced newborns. Points to be considered in such neonates are: maternal history of infections during pregnancy , mean of decrease in bilirubin/24 hrs & mean duration of phototherapy and neutrophilia in a jaundiced newborn should not be left unexplored. one should not rely on simple urine analysis for UTI.