SUMMARY AND CONCLUSION

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CMV is the most common cause of congenital and perinatal infections. Congenital disease occur in about 0.4 to 2.3% of neoborns. Most infections are asymptomatic at birth but later on 10% to 20% develop handcaps, mainly neurological disturbances.

Nosocomial acquisition of CMV by infants in day care centers, nurseries and hospitals have been reported. The risk of nosocomial transmission of CMV from infected patients to other patients, household contacts or medical personnel is controversal.

The aim of the present work is to study the prevalence of CMV infection in NICU in Benha University Hospitals, to detect possible nosocomial transmission of CMV infection and determine possible risk factors for neonatal CMV infection.

This study was carried on 194 subjects. They were classified into 2 groups :

Group I : Consisted of 175 neonates in NICU. They were classified into 3 subgroups :

Group I (A) : Consisted of 10 neonates with congenital CMV infection.

Group I (B) : Consisted of 12 neonates with perinatal CMV infection.

Group I (C) : Consisted of 153 neonates without evidences of CMV infection.

Group II : Consisted of 19 employee in the same unit.

All neonates were subjected to thorough history, clinical examination and laboratory investigations that include complete blood picture, total and direct serum bilirubin and renal function tests. Employee in NICU were subjected to thorough history and clinical examination.

All members of the study were investigated for serum CMV-IgG and IgM by ELISA technique and CMV - DNA by PCR.

The results obtained showed that from 175 neonates in NICU in Benha University Hospital. The overall prevalence of CMV was 12.57%, 10 (5.71%) had congenital infection, while 12 (6.86%) had perinatal infection.

In neonates with congenital CMV infection the prevalence of breast milk feeding, congenital anomalies and blood transfusion were 80%, 30% and 60% respectively. Mortality rate among them was 20%.

In neonates with perinatal CMV infection the prevalence of breast milk feeding, congenital anomalies and blood transfusion were 75%, 16.67% and 50% respectively. Mortality rate among them was 16.67%.

On the other hand from 19 employee, 2 (10.53%) were CMV-DNA positive by PCR, non of them was CMV-IgM positive and all of them were CMV-IgG positive.

By using stepwise multiple logestic regression analysis, the risk factors related to CMV infection among neonates in NICU were, low birth weight, congenital anomalies and breast milk feeding, while CMV infection among employee was related to blood transfusion and employment period.

In our results there was no correlation between neonates in NICU and employee in the same unit.

CONCLUSIONS

From this study it could be concluded that:

1- CMV infections are more prevalence in premature and low birth weight neonates in NICU.

2- Neonates fed on breast milk are more brone to CMV infection.

3- The use of conventional blood may transmit CMV.

4- No evidence of nosocomial CMV transmission to employee in NICU.

RECOMMENDATIONS:

1- Strict preventive measures for CMV transmission must be done for all neonates especially prematures and low birth weights.

2- Breast milk from known CMV positive mothers or toddlers must be avoided or pasteurized before used.

3- CMV must be suspected in neonates suffering from fever, hepatosplenomegaly, congenital anomalies, anemia and or thrombocytopenia.

4- Blood transfusion should be limited, only CMV screened blood is used. Recent trends of using packed RBCs, platelets, plasma or leukodepleted blood must be widened.

5- Screening of hospital employee for CMV is still costly but may be recommended especially for persons with close contact to high risk patients.

6- Follow up of CMV infected neonates to evaluate and possibly treat the sequelae of infection at older ages.

7- Although nosocomial transmission of CMV is not proven in the present work, it is clear that, CMV constitute a problem among

neonates in NICU. So, workers and employee in the unit must be informed about the dangers, mode of transmission and preventive measured of CMV infection, especially those in childbearing age.

8- Large scale studies on another places in the hospital dealing with high risk groups of patients such as hemodialysis unit, oncology unit, transplantation unit etc., so as to identify its role in nosocomial transmission of CMV.