
Study of the incidence and predictors of neonatal hyperbilirubinemia in shebeen el koom teaching hospital

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The high incidence of neonatal jaundice combined with the shortening of post natal stay at hospital make the early screening and surveillance for neonatal hyperbilirubinemia essential to ensure that these infants are not missed, as it is still not known at what level bilirubin can cause a significant risk of brain damage. So before discharge, every newborn infant should be assessed for the risk of hyperbilirubinemia. The pre-discharge bilirubin measurements using TSB or TCB and/or assessment of clinical risk factors are used as screening tools for predicting the neonatal hyperbilirubinemia. This study aimed at detecting the incidence of neonatal hyperbilirubinemia at Shebeen Elkoom teaching hospital among the period from January, 2007 through June, 2007, predicting the neonatal jaundice by using the both clinical scoring system and TCB measurements and finally performing a correlation between TCB and TSB. Our study included 230 neonates, of them 72 cases (31.3%) developed hyperbilirubinemia. There was a statistically significant increase in the incidence of neonatal hyperbilirubinemia in babies whose mothers had hypertension, pre eclampsia, diabetes mellitus, obstructed labor and mothers with previous jaundiced baby. While there was no statistically significant increase in the incidence of neonatal hyperbilirubinemia in babies whose mothers had vaginal bleeding, prolonged rupture of membranes, oxytocin use and mothers delivered by CS. Summary & Conclusion- There was a statistically significant increase in the incidence of neonatal hyperbilirubinemia in babies with cephalohematoma, premature delivery, those with SGA, those with combined breast and bottle feeding and male infants. There was no statistically significant increase in the incidence of neonatal hyperbilirubinemia among the babies with exclusive breastfeeding. There was a very strong positive correlation between TSB and TCB with ($r=0.997$). A clinical risk scoring also was suggested for detection of neonatal hyperbilirubinemia but we found that there is a priority for using pre-discharge TCB rather than the clinical scoring system in prediction of neonatal hyperbilirubinemia. From the above results it is concluded that:- 1- Every newborn should be assessed for the risks of developing severe hyperbilirubinemia postnatally. 2- Early prediction of neonatal hyperbilirubinemia by pre-discharge TCB or TSB and/or assessment of clinical risk factors are important to avoid the hazards of severe hyperbilirubinemia and its threat of brain damage. 3- The pre-discharge bilirubin measurement is more accurate and generates wider risk stratification than

a clinical risk factor.4- TCB measurements had demonstrated a strong positive linear correlation with TSB.5- Exclusive breastfeeding decrease the incidence of neonatal jaundice compared to bottle feeding, but if these infants are starved or dehydrated, they could probably be at higher risk of bilirubin encephalopathy.6- There is no effect of oxytocin used for labor induction in the incidence of neonatal jaundice.