Summary

Neonatal jaundice is a cause for parents' anxiety as well as physicians due to its complications and prolonged hospital stay with increase cost. With early hospital discharge practice, neonatal hyperbilirubinemia has become an important cause for hospital readmission.

Haptoglobin is a plasmaα_2- glycoprotein which binds free hemoglobin thus preventing oxidative damage; haptoglobin is an integral part of acute phase reactant in term neonates.

The aim of this study is to determine if cord blood haptoglobin can be used as an early indicator of neonatal jaundice in full term neonates.

This study was conducted in a prospective random way in the delivery room and neonatal intensive care unit (NICU) of Gynecology and Obstetrics Hospital of Kafer Elzyat. A total of fifty full term neonates with gestational age ranging between 38 and 42 weeks were consecutively enrolled in the study in a period of January to June 2011.

In all cases gender, birth weight, gestational age, delivery route, feeding pattern, maternal age, and whether there is enclosed hemorrhage or history of neonatal jaundice in pervious sibling.

Full clinical examination of the neonates including anthropometric measures and reflexes were done.

Data was collected then computerized and submitted to statistical analysis using statistical package for social science (SPSS) and program under window version q.

Our study showed that a significant negative correlation was found between the haptoglobin in umbilical cord blood and fifth day total bilirubin values of the newborns ($p < 0.001$).The haptoglobin level decreases in umbilical cord blood without any increase in the bilirubin level in the same serum.

Our study showed that all cases readmitted in fifth day received only phototherapy treatment and no need for exchange blood transfusion.

Our study showed that the ROC curve between positive cases (cases with pathological jaundice) and negative cases (cases without jaundice or physiological jaundice) as regard umbilical cord haptoglobin was at a cut off level 2.4 where sensitivity was more than 86 %, specificity more than 91%, positive predictive value was more than 81%, negative predictive value 94 % and accuracy was more than 93%. As the result of this curve we can predict the development of pathological neonatal jaundice when the haptoglobin level in the umbilical cord <2.4 mg/dl and follow up these cases and prevent problem based on early hospital discharge.