SUMMARY AND CONCLUSION

During the first week of life all newborns have increased bilirubin levels by adult standards, with approximately 60% of term babies and 85% of preterm babies having visible jaundice.

Most of these cases are benign but it is important to identify those babies at risk (although rare) of acute bilirubin encephalopathy and kernicterus/chronic encephalopathy. Jaundice may also be a sign of a serious underlying illness.

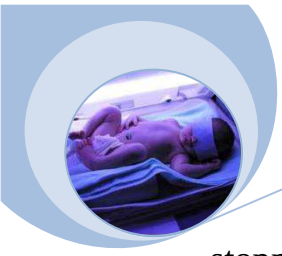
This prospective descriptive study was carried out in the Neonatal Intensive Care Unit among birth hospitalization neonates in Al-Gomhoreya general hospital who were diagnosed as neonatal hyperbilirubinemia during the period from January to May 2011.

Our study was conducted to determine the incidence and magnitude of post-phototherapy bilirubin rebound in neonates.

Subjects included neonates needing phototherapy for hyperbilirubinemia. Standard guidelines were used to start and stop phototherapy. ***Significant bilirubin rebound*** (SBR) was defined as post-phototherapy bilirubin level needing reinstitution of phototherapy.

Rebound bilirubin was measured 24+/-6 h after stopping phototherapy.

Among 100 neonates with hyperbilirubinemia, post-phototherapy **bilirubin** estimation was done. A total of 9(9%) neonates developed SBR. In neonates with SBR, **bilirubin** increased by 2.9 mg/dL after



stopping phototherapy. Risk factors for SBR included birth at <35 weeks of gestation (15.4%, 2/13), birth weight <2000 g (7.8 %, 1/14) and onset of jaundice at >60 h of age (10 %, 6/60).

In our study, we used charts which were recommended by the American Academy of Pediatrics but recommenced phototherapy if the rebound bilirubin level was above the value which was appropriate for the patient's age and risk factors.

Post-phototherapy discharge and follow-up planning was taken into account these risk factors.

It is not necessary to keep infants in the hospital to check for **rebound**. However, for infants who require phototherapy during their birth hospitalization, and for those with significant hemolytic disease post-phototherapy neonatal **bilirubin rebound** to clinically significant levels may occur.

Risk factors of **significant bilirubin rebound** (prematurity <35 wks., direct Coombs test positivity, birth weight <2000 g, and onset of jaundice < 60 hours of age) should be taken into account when planning post-phototherapy follow up **bilirubin** level 18-24 hours after discharge.

Because of rare instances of significant **rebound** have occurred in infants who were re-admitted, additional clinical follow-up is appropriate, particularly if phototherapy is discontinued at higher total serum **bilirubin** levels than used in our overviewed study.