Background and Aim Serum bilirubin measurement is still the cornerstone method to assess hyperbilirubinemia in NN this method is invasive, painful, costly, needs more than one prick and may need to anemia due to repeated blood sampling.

Aim To compare trancutaneous bilirubin measurement with serum bilirubin.

Patients and Methods An average of three readings at different sites on the skin of NN using the bilirubinometer was taken babies included were FT, with indirect hyperbilirubinaemia, not exposed to phototherapy. Blood samples were collected at the same time for comparison.

Results A total of 101 measurements for each method were performed 67 babies were > 2.5 kg, 34 babies were < 2.5 kg. Age range was few hrs to 14 days. There was excellent matching between the two methods of bilirubin measurement regardless of gestational age, birth weight, sex, post natal age.

Conclusion Transcutaneous bilirubin measurement is an alternative reliable way to assess hyperbilirubinemia that avoids the drawbacks of blood sampling. It is highly recommended in OPD, ER, NNU.

ASSOCIATION OF TRANSCUTANEOUS CARBON MONOXIDE AND BILIRUBIN LEVELS IN HEALTHY TERM NEWBORNS

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Background and Aims End tidal measurement of carbon monoxide (CO) as a side product of hemoglobin turnover may over be an indicator of bilirubin production and hemolysis. We aimed to evaluate the association of transcutaneous CO measurement and bilirubin levels in healthy term newborns as an alternative to end tidal CO.

Methods A total number of 390 infants were recruited in the study. Infants who were born in our hospital (n=340) were followed by daily transcutaneous CO and capillary bilirubin measurements starting from birth to discharge. Remaining 50 infants were admitted for hyperbilirubinemia treatment after 72 hours of life. Transcutaneous CO measurements were done by Masimo pulse oximeter.

Results Capillary bilirubin and transcutaneous CO levels on 24 and 48 hours of life were positively correlated (Spearman correlation coefficients r = 0.21 and 0.87 respectively, p values for both analyses < 0.001). Bilirubin levels and transcutaneous CO measurements were levels were also positively correlated in infants admitted for hyperbilirubinemia (Spearman correlation coefficient r = 0.41, p < 0.001).

Conclusion Our data showed positive and statistically significant correlations between bilirubin and transcutaneous CO measurements in healthy term newborns and newborns with hyperbilirubinemia. Therefore transcutaneous CO measurement deserves attention in order to obtain threshold levels for prediction of severe hyperbilirubinemia.