INTRODUCTION AND AIM OF THE WORK

Hyperbilirubinemia is one of major problems of the neonates, because of high level of serum bilirubin in the newborn can produce encephalopethy. Therefore , Monitoring of serum bilirubin in cases of hyperbilirubineamia is vital and should be repeated at frequent intervals , howefer taking blood sample from the neanates is not always an easy job , plus being an invasive and traumatizing procedure "Yamamouchi et al 1980".

In the newborn infants progressive hyperbilirubineamia is accompanied by cauded marching course of dermal icterus which begins at the face and proceeds to the trunk , the extremities and finally to the palms and soles.

This clinical observation was described by rolleston and Mc. Nee in 1929 but has not been previously correlated with actual level of serum bilirubin.

As general observation dermal icterus was not descrinible of serum bilirubin levels was of less than 4 mg /100 ml. (Zuelzer and Brown 1961 .).

At higher bilirubin concenterations a predictable direct relationship between bilirubin levels and cephalopedal progression of dermal icterus was independant of clinical status of newborn studied and appears to depend only on rate of rise of serum bilirubin concenteration .(Brown 1962)

The appearence of dermal icterus was confined to the face

[redacted] "Zone I " when serum bilirubin concentration was between 4-8 mg /100 ml , the dermal icterus progressed to the trucnk as far as umblicus " Zone 2 " at levels between 5-12 mg/100 ml as dermal icterus advanced to the groin and upper thighs "Zone 3" the serum bilirubin level between 8-16 mg/100 ml.

The knees and elbows to the ankles and wrists "zone 4" became icteric between levels of 11-18 mg /100 ml, the feet and hands including soles and palms "Zone 5 " became icteric at serum bilirubin levels of 15 mg/100 ml or higher. In all cases studied there was no infants with a serum bilirubin level greater than 18 mg /100 ml whose hands and feets were not icteric.

the cephalo-pedal progression of dermal icterus was noted to continue only as long as the concenteration of serum bilirubin increases.

When the serum bilirubin began to fall from its peak level the dermal staining always faded gradualy in all affected skin areas at the same time , rather than cephalad· regression. (Mather,1960)

AIM OF THE WORK

The aim of the present work is to determine the degree of correlation of the transcutaneaus bilirubin measurement by icterometer and serum bilirubin of blood samples in Neonates.