Comparison of klimek method versus Ballard method in determining gestational age in Imam Reza and Quaem Hospital of Mashhad university of Sciences

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Background: Severe prematurity is responsible for 60-80% of mortality in neonates without abnormalities. Objective: to define the exact time of fetus maturity, complications and side effects could be predicted and best decisions could be made.

Materials and method: This study is a descriptive cross sectional research in which 229 neonates, who were admitted in the post partum department in Qaem and Imam Reza Hospital in Mashhad. The neonate's maturity was determined according to Ballard and Klimek method. The examination was in the first 6-12 hours after birth. Analysis of data was by the SPSS soft ware, Mann Whitney test and Kappa agreement value.

Results: In this study determination of gestational age in the 2 methods N. Ballard and first day of LMP was not statistically significant and 74.6%(171 case) had the same gestational age in both methods (p=0.664). Also determination of gestational age by klimek method and the first day of LMP was not statistically significant and 75.9 %( 174 case) had the same gestational age in both methods (p=0.943) and in 51.5 % (118 case) both methods detected mature neonates.

Conclusion: For the determination of neonatal maturity, the results of klimek method, Ballard method, and last day of LMP (negel law) were completely compatible.

KEY WORDS: Gestational age, Neonatal maturity, premature birth, Fetus maturity