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**The objective:** Evaluation of fetal and neonatal immediate impact of pregnancy hypertensive disease, and a comparison between the severity of gestational hypertensive disease and neonatal outcome.

**Materials and Methods** This work was based on the analysis of the neonatology registers of the maternity service in Rabat's university hospital during 2010. We selected the newborns from mothers with gestational hypertension, and we clarified the evolutionary stage of this disease. A standardized form of form has been established for this purpose.

**Results** 560 newborns met the analysis criteria, that is 3.69% of all newborns during this period. The average age of the parturients was 28±12 years. Delivery has been advocated by Caesarean in 53.2% of cases, perinatal asphyxia was associated in 12.8% of cases. The prematurity rate was 16.8%. The hypertrophy was observed in 44% and macrosomia in 3% of cases. Fetal mortality was observed in 10.7% of cases.

The preeclampsia represents 28.5% of cases, and retroplacental hematoma which is the most frequent maternal complication was 9.1%. Mortality and neonatal morbidity changes depending on maternal complications. Mortality and neonatal morbidity vary significantly according to maternal complications. In this study, the retroplacental hematoma, the HELLP syndrome and eclampsia are responsible for a high rate of fetal mortality (27.5%), neonatal mortality (12%) and perinatal asphyxia (39.6%) compared to preeclampsia and uncomplicated gestational hypertension.

**Conclusion** There is a clear correlation between the stage of the gestational hypertension evolution and the newborn's prognosis. The latter can be improved by a correct maternal prenatal monitoring.

#### 1274 A COMPARATIVE STUDY OF KLIMEK AND BALLARD METHODS IN DETERMINING NEONATAL MATURITY IN IRAN

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**Background** and purpose: Severe prematurity, as the most important factor in premature neonatal mortality, is of paramount importance and accounts for 60–80 percent of neonatal mortality without abnormalities. Therefore, by defining the exact time of fetus maturity, complications and side effects could be predicted and best decisions could be made. Since the present methods are complicated, time-consuming and stressful for the neonates, researchers decided to compare the simple Klimek method with the New Ballard method.

**Methods** and materials: This study is a descriptive cross-sectional research. Qualified neonates in a single group were examined for maturity by both Klimek and New Ballard methods. Neonate was examined by the first co-researcher with New Ballard method, and immediately examined by the second co-researcher with Klimek method. The second neonate was examined by the first co-researcher with Klimek method and then immediately by the second co-researcher with Ballard method. All 229 neonates were examined in this way. The examinations were done in the first 6–12 hours after birth. Analysis of data was conducted in SPSS, using Mann Whitney U and Kappa Coefficient.

**Results** In 74.6% (171 cases) the same gestational age was obtained by both methods ( $p=0.664$ ). Also, determination of gestational age by Klimek method and LMP was not statistically different; and 75.9% (174 cases) the same gestational age was obtained by both methods ( $p=0.943$ ). In 51.5% (118 cases), both methods detected mature neonates ( $K=0.806$ ).

**Conclusion** The simple Klimek Method is completely compatible with the New Ballard and LMP methods in determining neonatal maturity.

#### 1275 THE NEURODEVELOPMENTAL ASSESSMENT OF VERY LOW BIRTH WEIGHT INFANTS AT 4–6 YEARS OF AGE AND THE RELATIONSHIP WITH RISK FACTORS

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The major and minor neurodevelopmental morbidities among premature infants become an important issue because of the increase in the number of surviving premature newborns, especially in the smaller gestational age group.

The aim of this study was to examine the neuromotor outcome of the premature newborns at 4–6 years of age born with very low birth weight and to investigate the risk factors associated with this outcome.

The present study was conducted in 70 very low birth weight children born during April 2004 and June 2007. The neuromotor status of 68 children were evaluated according to Touwen. The hospital records of the children were scanned for various risk factors.

Three cases were already diagnosed and followed as CP. The remaining 65 children did not meet the criteria for CP. According to Touwen examination 28 (%41.2) children were considered as normal, 35 (%51.5) had simple minor neurological dysfunction, 2 (%2.9) had complex minor neurological dysfunction.

35 children with minor neurological dysfunction and 28 children with normal neuromotor status were compared for some risk factors. The children with minor neurological dysfunction had significantly lower Apgar score, their hospitalization period was longer and the diagnosis rate of clinical (%73.5; %25) and culture proven sepsis (%47.1; %10.7) was higher in this group.

Sepsis was significantly associated with adverse neurological outcome. The prevention of neonatal sepsis in NICU's will increase the chance for healthy neurological development.

#### 1276 GENOTYPIC EXPRESSION OF FADS2 IN PRETERM BABIES FED EXCLUSIVELY ON HUMAN MILK VERSUS FORMULA FED

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**Background** Exclusively breastfed premature babies have been shown to have higher intelligent quotient scores and superior cognitive development than those deprived of human milk. However the underlying cause has not been clearly defined.

**Aim** The aim of this study is to measure genetic expression of FADS2 gene responsible for cognition in babies exposed to different modes of feeding.

**Methods** Thirty preterm babies were studied for gene expression of FADS2 at birth and three months later. They were randomized into those supported to exclusively breastfeed (15) and those exposed to the normal routine of formula feeding practices in the neonatal intensive care units.

**Findings** There was no difference between gene expression between the groups at birth. However FADS2 expression was shown to be significantly higher in the breast fed groups at three months of age.

**Conclusions** Exposure of preterms to human milk potentiates cognition through influencing transfer and/or maturation of genetic information responsible for cognition.