

NICU blood sugar was tested with glucometer and if it was less than 40mg/dl and if this low level was confirmed by laboratory, the patient entered this study. For the determination of etiology of hypoglycemia more diagnostic tests were performed and according to history, physical examination and laboratory findings the etiology of hypoglycemia was defined and finally all these information were recorded in the questionnaire.

**Results:** According to this study, 7.5% of neonates that admitted in Emam Reza hospital NICU had hypoglycemia and the most common Etiologies for hypoglycemia included: prematurity, Asphyxia and SGA.

**Conclusion:** Incidence of neonatal hypoglycemia in our NICU is identical that of western countries and is less than the incidence of hypoglycemia in developing world. and because the most common etiology of neonatal hypoglycemia is prematurity, SGA and Asphyxia, we can decrease its incidence through better control of preterm deliveries and through preventing preterm labor and also institution of good resuscitation measures when needed.

**Keywords:** Hypoglycemia, Prematurity, Asphyxia

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### **PREGNANCY INDUCED HYPERTENSION AND SIGNS OF DECREASED INSULIN SENSITIVITY IN THE NEONATES**

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**Aim:** To determine the impact of maternal pregnancy induced hypertension (PIH) on insulin sensitivity in term neonates.

**Methods:** The study group consisted of 130 term neonates without major malformations, whose mothers did not have chronic hypertension or intrauterine infections. Neonates were divided into two groups according to the maternal presence or absence of PIH. Anthropometric measurements were performed at birth. Fasting glucose and insulin levels were measured on the 3<sup>rd</sup> day after birth. Lipids were determined from blood samples obtained by venipuncture from 72 neonates.

**Results:** The 24 neonates born to mothers with PIH had significantly lower birth weight, body length and chest circumference ( $p < 0.05$ ) than

106 neonates born to mothers without PIH. Insulin levels and insulin:glucose ratio in neonates born to mothers with PIH were significantly higher than that in controls (mean $\pm$ SE 15.98 $\pm$  2.18 vs 10.33 $\pm$  1.04  $\mu$ IU/ml,  $p < 0.05$ ; 4.15 $\pm$  0.57 vs 2.52 $\pm$ 0.27,  $p < 0.05$ , respectively), despite similar glucose levels (mean $\pm$ SE 4.07 $\pm$  0.26 vs 4.45 $\pm$  0.14 mmol/l,  $p=0.265$ ). This association was still observed after adjusting for birth weight. Furthermore, 12 neonates of mothers with PIH had significantly higher mean triglyceride levels, and lower mean high-density lipoprotein cholesterol levels than 60 neonates from mothers without PIH (mean $\pm$ SE 1.98  $\pm$  0.24 vs 1.36  $\pm$  0.11 mmol/l,  $p < 0.05$ ; 0.51  $\pm$  0.11 vs 0.81 $\pm$  0.05 mmol/l  $p < 0.05$  respectively).

**Conclusion:** Intrauterine environment may be a major determinant in neonatal metabolism; maternal PIH may influence birth weight and insulin sensitivity of term neonates.

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### **PEDIATRIC ADRENOCORTICAL TUMORS. TWENTY FIVE YEARS EXPERIENCE IN A UNIVERSITY HOSPITAL IN TEHRAN, IRAN**

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Adrenocortical tumors are rare childhood and adolescent neoplasms. More than 95% of these tumors are functional and present with virilization, Cushing's syndrome, hypertension or hyperestrogenism. During 25 years of experience in Taleghani hospital, Tehran, Iran, we could find 7 cases of such tumors. Patients were 2 males and 5 females, aged 2-16 years. Five patients presented with virilization, one with a mixed picture of acute psychosis, Cushing's syndrome and feminization and one with Cushing's syndrome. Duration of the disease was between 4 months to 5 years and 3 patients were erroneously diagnosed and treated as congenital adrenal hyperplasia. Diagnosis was confirmed with basal hormonal evaluation, suppression tests and appropriate imaging. All patients underwent open surgery. During surgery a blood sample was drawn from the adrenal vein of the affected side and its steroid contents were compared with the data obtained from the peripheral blood during and after surgery. Adrenal vein evaluation revealed that cortisol, testosterone and other hormones were directly secreted from the tumor and peripheral conversion had a limited