

Prevalence of Gastroesophageal Reflux during the Infant's First Year of Life in the Pediatric Department of Imam Reza Hospital

Amirian Mohammad Hadi, Kouzegaran Samaneh, Hamed Abdolkarim

Pediatric Department of Imam Reza Hospital, Mashhad University of Medical Sciences, Mashhad, Iran

Introduction: Gastroesophageal reflux (GER) is the most common esophageal disorder, which occurs at all ages. GER is defined as the passage of gastric contents into the esophagus. GER disease (GERD), which is a long-term complication, is a common pediatric problem. Clinical manifestations of GERD in infants include regurgitation, irritability, choking, gagging, vomiting, poor weight gain, and respiratory disorder. The purpose of this study was to evaluate the prevalence of GER and its symptoms in infants during the first year of life.

Methods: This study was performed on 75 infants younger than one year of age, who were admitted to the pediatric department of Imam Reza Hospital in Mashhad during 3 months.

Results: The current study included 75 infants younger than one year of age, who were admitted to the pediatric department of Imam Reza Hospital. GER was reported in 66% of these infants. The most common symptom of reflux was regurgitation, reported one to seven times a day (60% of the cases at 3.5 months). The other reported symptoms were irritability (16%), choking (10%), and failure to thrive (0.3%), respectively.

Conclusion: GER is a common problem during infancy, and complaints of regurgitation are common during the first year of life. Therefore, understanding GER symptoms and detection of GERD are of high significance.

Keywords: *Gastroesophageal reflux, Infant, Prevalence*

A New Synbiotic Can Increase Weight Gain in Infants with Cow's Milk Allergy: A Randomized Controlled Trial

Hamid Ahanchian, Hamid Reza Kianifar, Reza Farid, Seyyed Ali Jafari,

Allergy Research Center, Mashhad University of Medical Sciences, Mashhad, Iran

Introduction: Cow's milk protein allergy is the most common food allergy in many countries, with clinical importance in different aspects. Synbiotic, a combination of probiotics and prebiotics, could be effective in the management of this allergy through modulating the immune system and improving the nutritional status.

Methods: In this randomized, controlled trial, 32 infants with cow's milk allergy (with symptoms such as rectal bleeding, diarrhea, vomiting, and colitis) were divided into two control and study groups. The study group received a synbiotic mixture containing 1 billion colony-forming units (CFU) of *Lactobacillus casei*, *Lactobacillus rhamnosus*, *Streptococcus thermophilus*, *Bifidobacterium breve*, *Lactobacillus acidophilus*, *Bifidobacterium infantis*, *Lactobacillus bulgaricus*, and Fructooligosaccharide (Protexin restore) for 4 weeks on a daily basis. Clinical symptoms and growth indices (weight, head circumference, and height) were recorded at the end of the first and third months.

Results: At the end of the third month, the effects of synbiotic administration on weight and head circumference were statistically significant ($P=0.019$ and $P=0.035$, respectively), although the subjects' height was not significantly affected ($P=0.874$). Also, there was not a significant association between the resolution of clinical symptoms (e.g., rectal hemorrhage, diarrhea, and vomiting) and height during the three-month follow-up period.

Conclusion: As the effects of probiotics are strain-dependent, performing clinical trials with different strain mixtures can increase our knowledge about the effects of these agents on allergic diseases. In this study, we showed that a mixture of seven probiotics and Fructooligosaccharide can increase weight gain and head circumference in children with cow's milk protein allergy.

Keywords: *Cow's milk allergy, Newborn, Synbiotic*

Hypoparathyroidism as the First Manifestation of Kearns-Sayre Syndrome: A Case Report

Ashrafzadeh Farah¹, Ghaemi Nosrat², Akhondian Javad¹, Beiraghi Toosi Mehran³, Elmi Saghi^{4*}

1. Professor of pediatric neurology, Ghaem Medical Center, Mashhad, Iran
2. Professor of Pediatric Endocrinology, Imam Reza Center, Mashhad, Iran
3. Fellowship of Pediatric Neurology, Medical Center, Mashhad, Iran
4. Pediatrician, Ghaem Medical Center, Mashhad, Iran

Kearns-Sayre syndrome is a mitochondrial myopathy, which was first described by Tomas Kearns in 1958. Diagnostic symptoms of this condition include retinitis pigmentosa, chronic progressive external ophthalmoplegia, and one or more of the following factors: cardiac conduction system diseases, cerebellar ataxia, and cerebrospinal fluid (CSF) with protein content above 100 mg/dL. The nature of this uncommon disease is yet to be clarified. According to previous reports, it is uncommon to see hypoparathyroidism as the first manifestation of Kearns-Sayre syndrome. Herein, we report a case of Kearns-Sayre syndrome, with hypoparathyroidism as the first manifestation.

Keywords: Hypoparathyroidism, Kearns-Sayre, Mitochondrial cytopathy, Ophthalmoplegia

Evaluation of the Relationship between Unwanted Pregnancy and Infant Feeding

Nasrin Baghdari¹, Zahra Khosravi Anbaran², Ahmadreza Zarifian³, Aghdas Karimi^{4*}

1. Faculty Member, Nursing and Midwifery School, Women's Health Research Center, Mashhad University of Medical Sciences, Mashhad, Iran
2. M.Sc. of Midwifery, Mashhad University of Medical Sciences, Mashhad, Iran
3. Student Research Committee, Medical School, Mashhad University of Medical Sciences, Mashhad, Iran
4. PhD Student of Reproductive Health, Student Research Committee, Nursing and Midwifery School, Mashhad University of Medical Sciences, Mashhad, Iran

Introduction: Unwanted pregnancy is one of the most important problems, facing married couples. This type of pregnancy has a negative impact on maternal, fetal, and neonatal outcomes. In this study, we aimed to evaluate the relationship

between unwanted pregnancy (based on the couples' opinions) and infants' nutrition in patients admitted to medical centers of Mashhad in years 2009-2010.

Methods: In this cross-sectional study, 300 women with infants under the age of 1 year, who were referred to medical centers of Mashhad, were asked whether or not their pregnancy was planned. Then, they were questioned about their infants' nutritional status (at the age of 4 months). Data were collected using questionnaires and interviews. Validity and reliability of the methods were confirmed using content analysis and test-retest. Data were analyzed using SPSS version 11.5 and statistical tests. In statistical tests, P-value of 0.05 was considered statistically significant.

Results: The findings of statistical analysis showed a significant association between unwanted pregnancy and infant's nutritional status (P=0.03). Also, the prevalence of unwanted pregnancy in couples with lower education level (high-school education or less) was noticeably higher than other couples.

Conclusion: Since unwanted pregnancy often leads to non-exclusive breastfeeding and adverse health outcomes, we highly recommend avoiding unprotected intercourse. Educational programs and marital consultation are also useful for raising couples' awareness.

Keywords: Breastfeeding, Infant nutrition, Unwanted pregnancy

The Relationship between Women's Postpartum Sexual Function and Infant Feeding

Zahra Khosravi Anbaran¹, Nasrin Baghdari², Maryam Pourshirazi³, Aghdas Karimi^{4*}

1. M.Sc. of Midwifery, Mashhad University of Medical Sciences, Mashhad, Iran
2. Faculty Member, Nursing and Midwifery School, Women's Health Research Center, Mashhad University of Medical Sciences, Mashhad, Iran
3. M.Sc. Student of Midwifery, Nursing and Midwifery School, Mashhad University of Medical Sciences, Mashhad, Iran
4. PhD Student of Reproductive health, Student Research Committee, Nursing and Midwifery School, Mashhad University of Medical Sciences, Mashhad, Iran

Introduction: Breastfeeding is the ideal source of nutrition for infants. However, there is controversy regarding the effect of breastfeeding on mothers' sexual function. Therefore, this study aimed to

assess the relationship between postpartum sexual function and infant feeding method in women referring to Mashhad healthcare centers.

Methods: This descriptive, analytical study was performed on 366 women, referring to Mashhad healthcare centers. The subjects' sexual function and infant feeding method were assessed four months after childbirth. Data were collected using the standard Female Sexual Function Index (FSFI) and infant feeding method questionnaire; validity and reliability of the instruments were confirmed. Data were analyzed using SPSS version 11.5 and descriptive and analytical tests.

Results: There was a significant association between women's sexual function score and infant feeding method four months after childbirth ($P=0.04$). The highest score was obtained by women with exclusive breastfeeding (6.23 ± 3.5).

Conclusion: This study showed a relationship between infant feeding method and women's sexual function. In fact, women with exclusive breastfeeding obtained high scores of sexual function. Therefore, according to the results, it is essential to train and consult women about exclusive breastfeeding and its positive effect on sexual function.

Keywords: Female sexual function, Infant feeding method, Postpartum

Factors Contributing to Intrauterine Fetal Death in the City of Kalat in Years 2009-2012

Reza Saeidi¹, Fatemeh Naghipour Borj², Azam Rezaei Danesh^{3*}, Nayereh Esmailzadeh⁴, Fahimeh Amani⁵

1. Pediatric subspecialist, Mashhad University of Medical Sciences
2. Midwife, Kalat Healthcare Center, Mashhad University of Medical Sciences
3. Expert of health at Mashhad University of Medical Sciences; E-mail: rezaeida1@mums.ac.ir
4. Expert of health at Kalat Healthcare Center
5. Expert of health at Kalat Healthcare Center

Introduction: Intrauterine fetal death after 20 weeks of gestation is a pregnancy-related problem. The rate of stillbirth in each area is an indicator of health status and prenatal care in that specific region. In different countries, the rate of stillbirth has been reported as 4 to 20 per 1000 births. Several factors contribute to the occurrence of stillbirth including timely identification and intervention. This study aimed to investigate the

causes of stillbirth in Kalat city during 2009-2012.

Methods: In this retrospective, descriptive study, the population included all pregnant women, who experienced stillbirth during their term delivery. Data were collected by interviewing the parents, reviewing the health records, and completing the standard questionnaires.

Results: Findings indicated that 81% of expecting mothers experienced stillbirth, and 18.7% of them lived in villages. Overall, 75% and 25% of the mothers were within the age range of 18-35 and > 35 years, respectively. In this study, 62.5% of the mothers had received prenatal care and 12.5% of the subjects had experienced stillbirth; also, 18.7% and 6.2% of the mothers had (at least) one and two abortions, respectively. The sex ratio of stillbirths were against and 50%. In total, 18.7% of women did not consume supplements during pregnancy. The causes of mothers' admission to healthcare centers were fetal movement reduction (or lack of it) in 31.2% of the cases, spotting or bleeding in 25% of the cases, onset of labor in 18.7% of the cases, abdominal pain in 6.2% of the mothers, and seizures in 6.2% of the mothers; also, in 25% of the cases, the cause of admission was uncertain. Causes of stillbirth included eclampsia (12%), meconium aspiration (13%), hypertensive disorders (19%), detachment (18%) and 38% were unknown.

Conclusion: Based on the findings, fetal or neonatal death has psychological consequences for families. Therefore, it is necessary to improve the quality of prenatal care and familiarize mothers with the risk factors during pregnancy.

Keywords: Fetus, Pregnancy, Stillbirth

Associated Risk Factors and Prevalence of Congenital Malformations in Ardabil, Iran

Rahele Alijahan¹, Mehrdad Mirzarahimi², Peimaneh Ahmadi³, Sadegh Hazrati^{4*}

1. MSc of Midwifery, Healthcare Center, Ardabil, Iran
2. Assistant professor, Community Medicine Department, School of Medicine, Ardabil University of Medical Sciences, Ardabil, Iran
3. Bachelor of midwifery, clerk of Ardabil District Health Center, Ardabil, Iran
4. Assistant professor, School of Public Health, Ardabil University of Medical Sciences

Introduction: Congenital anomalies are the most common cause of disability in developed and developing countries. Costs of hospitalization and

treatment of congenital anomalies pose a significant burden to families and societies. The objective of the present study was to determine the associated risk factors and prevalence of congenital malformations in Ardabil, Iran.

Methods: This cross-sectional study was conducted during November 2010 and July 2011 in three maternity hospitals, located in Ardabil, Iran. All live newborns were examined during the first 24 hours of life. Out of 6,868 live births during the study period, 57 neonates with congenital malformations were selected as the case group and 180 normal neonates were included as the control group. Data were collected using a researcher-made questionnaire and prenatal and delivery records. Data were entered to SPSS version 11, and statistical analysis was performed, using Chi-square along with univariate and multivariate logistic regressions.

Results: The prevalence of congenital malformations was 8.2 per 1,000 live births. Musculoskeletal system malformation was the most common congenital abnormality (35.1%), followed by central nervous system disorders (22.8%), digestive system disorders (17.5%), urogenital system diseases (15.8%), and chromosomal anomalies (8.8%). Also, polyhydramnion ($P=0.001$, $OR=14.4$, $CI:3.07-68.0$), oligohydramnios ($P=0.009$, $OR=13.09$, $CI:1.9-89.0$), preeclampsia ($P=0.000$, $OR=11.37$, $CI:2.99-43.14$), unwanted pregnancy ($P=0.000$, $OR=4.9$, $CI:2.0-13.0$), urinary tract infection in weeks 6-10 of pregnancy ($P=0.045$, $OR=2.88$, $CI:1.0-18.11$), and consanguinity ($P=0.038$, $OR=2.23$, $CI:1.0-4.78$) were determined as risk factors for congenital malformations.

Conclusion: Early diagnostic survey of pregnant women with polyhydramnios, oligohydramnios, preeclampsia, unwanted pregnancy, urinary tract infection in weeks 6-10 of pregnancy, and consanguinity may be an appropriate solution toward the prevention of congenital anomalies.

Keywords: Congenital malformations, Newborn, Prevalence, Risk factors

Comparison between Water Birth and Land Birth in terms of Fetal and Neonatal Outcomes

Marzieh Ghasemi¹, Fatemeh Tara^{2*}, Hami Ashraf³

1. Assistant Professor of Obstetrics and Gynecology, Pregnancy Health Research Center, Zahedan University of

Medical Sciences, Zahedan, Iran

2. Assistant Professor of Obstetrics and Gynecology, Omolbanin Hospital, Mashhad University of Medical Sciences, Mashhad, Iran

3. General Physician, Vice Chancellor of Research, Razavi Hospital, Mashhad, Iran

Introduction: Although warm water is used for labor pain reduction, there is controversy regarding the potential complications of water birth. Therefore, this study was performed to evaluate fetal and neonatal complications of water birth versus those observed in conventional modes of delivery.

Methods: This clinical randomized trial was performed on 200 pregnant women at Mashhad Omolbanin Hospital in years 2008-2009. In total, 100 subjects were allocated to the conventional delivery group and 100 women were included in the water birth group. In the water birth group, the patients were allowed to move freely and fluid intake was not limited. In the conventional delivery group, delivery was performed on a bed via a routine mode of delivery. Delivery duration, neonatal infection during the first week after delivery, early neonatal Apgar score, neonatal eye infection, and rate of NICU admission were compared between the two groups. Finally, 88 women in the conventional delivery group and 83 cases in the water birth group remained in the study. After data collection, data were analyzed using SPSS version 14, and Kolmogorov-Smirnov, Chi-square, and t-student tests were performed. P-value less than 0.05 was considered significant.

Results: The mean duration of the first stage ($P<0.344$), second stage ($P=0.372$), and third stage ($P=0.523$) of labor was not statistically different between the two groups. Cesarean section rate in the conventional delivery group was significantly higher than that of the water birth group ($P=0.018$). Also, 1- ($P=0.026$) and 5-minute ($P\leq 0.001$) Apgar scores in the water birth group were significantly higher than those of the conventional delivery group. No significant differences were observed between the two groups in terms of other variables.

Conclusion: Water birth can decrease labor pain and reduce the need for medical interventions; also, it does not have any adverse effects on the neonate. Therefore, it can be a suitable alternative for conventional deliveries. With proper selection of individuals and accurate monitoring during delivery, water birth can be a completely healthy method without further risks for the mother or the fetus.

Keywords: Complication, Conventional delivery,

Delivery duration, Water birth

The Effect of an Interventional Program, Based on the Theory of Ethology, on Breastfeeding Competence of Infants

Aghdas Karimi¹, Sepideh Bagheri², Talat Khadivzadeh³, Khadijeh Mirzaii Najmabadi⁴

1. PhD Student of Reproductive Health, Student Research Committee, Nursing and Midwifery School, Mashhad University of Medical Sciences, Mashhad, Iran
2. Assistant Professor of Pediatrics, School of Medicine, Mashhad University of Medical Sciences, Mashhad, Iran
3. Faculty Member, Nursing and Midwifery School, Women's Health Research Center, Mashhad University of Medical Sciences, Mashhad, Iran
4. Assistant Professor, Nursing and Midwifery School, Mashhad University of Medical Sciences, Mashhad, Iran

Introduction: According to the theory of ethology, separation of infants from their mothers immediately after birth can interfere with the infants' innate breastfeeding behaviours. The aim of this study was to assess the effect of an interventional program, based on the theory of ethology, on infants' breastfeeding competence.

Methods: In total, 114 primiparous, healthy, full-term mothers (within the age range of 18-35 years), undergoing normal vaginal delivery, were included in the study; the subjects were Iranian and intended to breastfeed their infants. The infants were placed in direct skin-to-skin contact with their mothers immediately after birth for two hours. Then, the rate of the infants' breastfeeding competence was compared with the control group, receiving routine hospital care.

Results: The rate of breastfeeding competence in the direct contact group was higher than the group receiving routine care ($P=0.0001$).

Conclusion: Early skin-to-skin contact between mother and infant promotes the infant's natural feeding behaviors and leads to earlier attainment of breastfeeding competence. These findings confirm the theory of ethology.

Keywords: *Breastfeeding competence, Infant, Theory of ethology*

Accuracy of Amniotic Fluid Index and Single Deepest Pocket Measurements in Predicting the Outcomes of Prolonged

Pregnancies

Mirteimoori Masoomeh^{1*}, Tara F², Amirian M¹

1. Assistant Professor of Obstetrics and Gynecology, Mashhad University of Medical Sciences, Mashhad, Iran
2. Associate Professor of Obstetrics and Gynaecology, Mashhad University of Medical Sciences, Mashhad, Iran

Introduction: Two techniques for sonographic evaluation of amniotic fluid are Amniotic Fluid Index (AFI) and Single Deepest Pocket (SDP). In this study, we aimed to determine the accuracy of AFI and SDP in predicting prolonged pregnancy outcomes.

Methods: In this prospective, double-blinded, cohort study, 362 women with more than 40 weeks of gestational age were evaluated. Both AFI and SDP methods were used for all patients. Pregnancy-related outcomes and complications including meconium-stained amniotic fluid (MSAF), 5-minute Apgar score, Neonatal Intensive Care Unit (NICU) admission, necessity of cesarean section, and mortality rate were evaluated. Sensitivity, specificity, positive predictive value, negative predictive value, accuracy, positive likelihood ratio, negative likelihood ratio, and diagnostic odds ratio were also calculated.

Results: Sensitivity and specificity of AFI in the diagnosis of MSAF were 68% and 47%, respectively; the rates were higher than those of SDP. Compared to SDP, AFI was more sensitive for predicting the necessity of cesarean section (85% vs. 68%). No association was found between abnormal 5-minute Apgar score and abnormal AFI or SDP.

Conclusion: Compared to SDP, AFI is a better method for predicting MSAF and necessity of NICU admission or caesarian section.

Keywords: *Amniotic fluid volume, Outcome, Prolonged pregnancy, Single deepest pocket*

Preconception Care and its Importance for the Health of Mother, Fetus, and Newborn in Mashhad University of Medical Sciences in Years 2009-2012

Zahra Aghasi Yazdi, Mohammad Ahmadian, Mina Ahadi, Azam Behzad Mehr

Department of Health, Mashhad University of Medical Sciences, Mashhad, Iran

Introduction: Preconception care is an integral part of healthcare services for women, in which

the existing risks for pregnancy are evaluated. This study aimed to determine the frequency of preconception care and its importance for the health of mother, fetus, and newborn in years 2009-2012.

Methods: In this descriptive retrospective study, the study population included newly-pregnant mothers, who had received preconception care and resided in urban and rural areas of counties. Data were gathered using forms of maternal care, which were prepared using the content of maternal health records.

Results: In 2009, of 90,329 pregnant mothers, who had referred to healthcare centers, 19,233 women (21.3%) had received preconception care. Among 77,563 pregnant mothers in 2010, 22,143 mothers (28.5%) had been provided with preconception care. Also, of 84,628 and 89,693 pregnant mothers, who had referred to healthcare centers in years 2011 and 2012, 39.2% and 42.8% had received preconception care by midwives and doctors, respectively.

Conclusion: Preconception care was provided for 19,233 eligible women in 2009, for 22,143 women in 2010, for 30,743 women in 2011, and for 36,029 women in 2012; this shows an increasing trend from 2009 to 2012. It seems that many diseases and medical conditions, which increase the mortality rate (as well as maternal, fetal, and neonatal complications) and require proper management, were identified and followed-up during these checkups.

Keywords: Preconception care, Pregnant, The health of mother and fetus

Effects of Education on Oral and Dental Care of Pregnant Women, Based on the Health Belief Model

Emami Moghadam Z¹, Sardarabadi F²

1. Department of Health, School of Nursing and Midwifery, Mashhad Nursing Student Orientation health community nursing, Mashhad University of Medical Sciences, Mashhad, Iran

Introduction: Oral/dental care is necessary for the health of mother and her fetus during pregnancy. Recent research has indicated a relationship between periodontal diseases and adverse pregnancy outcomes such as premature delivery, low birth weight, and neonatal admission in intensive care units. The present study aimed to examine the effects of education on

oral/dental care of pregnant women, based on the health belief model.

Methods: This interventional study was performed in 2012 on case (n=72) and control (n=72) groups, selected by multi-step random sampling, at Mashhad healthcare centers. The case group participated in 4 training session, based on the health belief model components. Data collection tools consisted of examination and a researcher-made questionnaire including 50 items regarding the components of health belief model (perceived susceptibility, severity, benefits, barriers, and action) and oral/dental care performance; the questionnaire was completed before and 45 days after the intervention.

Results: Before the intervention, no significant relationship was observed between the average scores of different components in the two groups. However, after the intervention, the average scores of knowledge and different components of the model (including susceptibility, severity, benefits, barriers, and performance) significantly increased (P<0.001).

Conclusion: The findings supported the impact and efficiency of health belief model in oral and/dental care training. Therefore, it is suggested that model-based training be performed to educate oral and dental care in healthcare centers; this type of training will ultimately decrease the symptoms of mother and child.

Keywords: Ducation, Health belief model, Pregnant women

The Importance of Screening in Congenital Hypothyroidism

Maryam Ziadi Lotf Abadi¹, Azar Khorshahi^{2*}, Babak Eghbali³

1. Department of Health, Mashhad University of Medical Sciences, Mashhad, Iran
2. Department of Health, Mashhad University of Medical Sciences, Mashhad, Iran
3. Department of Health, Mashhad University of Medical Sciences, Mashhad, Iran

Introduction: Congenital hypothyroidism is the most common cause of preventable mental retardation in children. However, early diagnosis and treatment improve the prognosis of mental retardation. Clinical diagnosis of Congenital hypothyroidism is not also evident in the neonatal period. Therefore, screening all newborns for

early diagnosis and treatment is essential. This paper aimed to analyze the results of neonatal screening at Mashhad University of Medical Sciences.

Methods: This cross-sectional study included all newborns who admitted in Mashhad hospitals From March 20, 2012 to March 19, 2013.

Overall, 104,399 cases referred to healthcare centers, and the soles of the feet were screened for congenital hypothyroidism. In this study, all the neonates were screened.

Results: Overall, 48% of the patients were females. Also, 82.6% of the samples were obtained within 3-5 days of birth and the rest after 5 days. Based on the experimental results, 95.2%, 4.6%, 0.2%, and 0.1% of the newborns had thyroid stimulating hormone (TSH) level of <5, 5-9, 10-19.9, and >20 mu/L, respectively. After the second test, 229 patients (prevalence=2 per 1000 live births) were treated based on the diagnosis of congenital hypothyroidism, and 84.7% of the cases were treated while they were less than 28 days of age.

Conclusion: Based on these results and the importance of rapid diagnosis and initiation of treatment in infants with congenital hypothyroidism, it is necessary to raise public awareness, encourage parents, and use the potential of other organizations and agencies.

Keywords: Congenital hypothyroidism, Hypothyroidism, Mental retardation, Screening

Effect of PRECEDE Model on Iron Supplement Intake of 6-12-Month-old Infants

Zarei A*¹, Karimi J², Gharibi F³

1. Public health expert, Department of Health, Kurdistan University of Medical Sciences, Sanandaj, Iran
2. Public health expert, the health center of Sanandaj, Kurdistan University of Medical Sciences, Sanandaj, Iran
3. Master of Health Services Administration, Office of Research and Technology, Medical Sciences, Sanandaj, Iran

Introduction: Iron deficiency anemia is the most common nutritional problem among children. This condition has affected approximately 48% of infants, worldwide. Given the importance of physical and mental development of young children, it is important to prevent this disease in order to prevent the loss of children's abilities. The aim of this study was to determine the effect

of PRECEDE model on iron supplement intake of children, aged 6 to 12 months, covered by healthcare centers of Sanandaj, Iran.

Methods: In this interventional study, 80 mothers were randomly allocated to case and control groups. Four sessions of educational intervention were held for 45 minutes. Before, immediately after, and three months after the intervention, the questionnaires were completed by the subjects. The data were collected using the PRECEDE model. Data were entered to SPSS version 18, and independent t-test, Chi-square, ANOVA, and Fisher's exact tests were performed.

Results: The mean scores of predisposing factors (knowledge and attitude), reinforcing factors, and enabling factors were significantly different between the intervention and control groups ($P < 0.001$). Also, iron intake increased from 68% to 95% ($P < 0.001$).

Conclusion: The results indicated the effectiveness of intervention programs, based on PRECEDE model and its main components (predisposing, enabling, and reinforcing factors), in the reduction of iron supplement intake in children (6 to 12 months old).

Keywords: 6-12-month-old children, Iron supplements, PRECEDE model

A Survey of Congenital Hypothyroidism Screening Results in Healthcare Centers of Isfahan, District No. 1

Sadeghi M, Chajaei F

1. Cardiologist, Master of Isfahan Healthcare Center, Isfahan, Iran

Introduction: Congenital hypothyroidism (CH) is one of the major preventable causes of mental retardation (MR) in infants. Before the implementation of screening programs, early diagnosis of CH at birth was impossible, and led to MR during childhood. CH screening not only promotes early diagnosis and rapid treatment, but also prevents the complications associated with CH. It also decreases families' burden and helps provide valuable information about the physiopathology and epidemiology of CH. This study aimed to evaluate the CH screening results in infants at healthcare centers of district No.1 of Isfahan for future planning.

Methods: In this retrospective, descriptive study, data were collected via registration forms, and then analysed using SPSS version 16.

Results: In this study, all the infants were screened by heel prick sampling (using a filter paper). In case the thyroid-stimulating hormone (TSH) level was 5 or more than 5 (3.5% of total infants), the subjects were referred for further evaluation and complementary diagnostic tests. Of all the screened infants, 44% were female and 56% were male. The sampling rates according to the age of the infants were as follows: 80.6% (3-5 days old), 18.7% (6-21 days old), and 0.7% (22 days old). Also, 88% of the infants had TSH titer of 5-9.9, 9% had TSH of 10-19.9, and 3% had TSH \geq 20z. Overall, 90.7% of the infants were urban residents and 9.3% lived in rural areas. Also, 6.4% of the screened infants were diagnosed with CH and were immediately treated.

Conclusion: The golden time for blood sampling is 3-5 days after birth. In this study, 80% of the mothers referred for screening at a standard time. More training is highly required, specially for pregnant woman during the 3rd trimester of pregnancy. In fact, the more mothers are trained in this regard, the more CH screening indicators are promoted. On the other hand, prevalence of the recalled infants was higher than the standard; therefore, the causes should be detected.

Keywords: Congenital, Hypothyroidism, Neonate

The Relationship between the Mother's Pre-pregnancy Body Mass Index (BMI) and Infant's Birth Weight

Ahmadreza Zarifian¹, Aghdas Karimi^{2*}, Habibollah Esmaili³, Roya Amel¹

1. Medical Student of Mashhad University of Medical Sciences, Student Research Committee, Mashhad, Iran
2. PhD Student of reproductive health, Student Research Committee, Nursing and Midwifery School, Mashhad University of Medical Sciences, Mashhad, Iran
3. Department of Biostatistics, School of Public Health, Mashhad University of Medical Sciences, Mashhad, Iran

Introduction: Birth weight, as one of the main indices of growth, is among the determining factors of survival. Given the absence of documented studies and lack of information regarding the influence of mothers' body mass index (BMI) on newborns' birth weight, this study was carried out with the aim to determine the relation between the mother's BMI at the beginning of pregnancy and the infant's weight at birth.

Methods: In the current cross-sectional study, 800

pregnant women, who were referred to medical and healthcare centers of Mashhad during 2011 (with a gestational age less than 12 weeks), were selected using stratified random multi-level cluster sampling. In the first prenatal checkup, a questionnaire, containing questions about personal information, was completed and mothers' BMIs were calculated. At birth, the infants' weight and other variables were surveyed. Analysis of data was done using SPSS version 11.5 and descriptive and analytical tests.

Results: Among 800 mothers, 14% were underweight (BMI<19), 51.8% were in the normal range (19<BMI<25), 19.6% were overweight (25<BMI<30), and 14.6% were obese (BMI>30). Based on the variance analysis test, the average birth weight of an infant increased with the mother's weight gain (P<0.001). Also, the average of infant's birth weight was significantly higher in mothers aged \geq 35 years, mothers who gave birth to male infants, and multiparous women. Low birth weight and preterm labor were significantly more prevalent among underweight mothers, and macrosomia was more common among the infants of obese mothers. Furthermore, cesarean section was more common among mothers with increased BMI. The results of the extrapolated linear model indicated that mother's BMI at the beginning of pregnancy plays a role in predicting the infant's birth weight.

Conclusion: The results of this study highlight the importance of mother's BMI at the beginning of pregnancy in improving her (and the child's) health indices. Abnormal BMI leads to undesirable prenatal complications. As a result, BMI can be used as a measure to identify pregnant women, who are at risk of maternal and neonatal complications, and prevent the associated problems.

Keywords: Birth weight, Body mass index (BMI), Pregnancy outcome

Esophageal Perforation Due to Nasogastric Tube Insertion: A Case Report

Mehdi Fathi¹, Marjan Joudi^{2*}

1. Assistant professor of anesthesiology, Faculty of Medicine, Mashhad University of Medical Sciences, Mashhad, Iran
2. Assistant professor of pediatric surgery, Faculty of Medicine, Mashhad University of Medical Sciences, Mashhad, Iran

Introduction: A Nasogastric (NG) tube insertion is a common technique in all neonatal intensive care units (NICUs). In some cases, NG insertion in infants with friable esophageal tissues may lead to some adverse side-effects, although such problems are not commonly seen. Esophageal perforation is a rare but known complication associated with this procedure.

Methods: An infant (first child), weighing nearly 2800 gr, underwent elective surgery on the first day of his life; there was no maternal history of diseases and the fetus was born in 39th week of pregnancy. The NG tube was first inserted in the NICU, and the tube, which enters the esophagus at around 5 cm of esophagus, hit a hurdle

Results: Simple radiography of thorax was performed after tube insertion, and the tube was detected in the first intra rib; esophageal atresia was suggested.

Conclusion: Conservative management in an otherwise uncomplicated case can result in complete recovery in most affected neonates. This case highlights the fact that esophageal perforation can happen due to procedures such as NG tube insertion.

Keywords: Nasogastric tube; perforation; insertion

Evaluation of Outcome of Mothers with Breast Cancer during Pregnancy, Fetal and Neonatal Development

Mojgan Karimi-Zarchi*, Marzie Ghane Ezabadi, Mitra Rohi, Saeed Hekmatimoghaddam, Mohammad-Reza Mortazavizade, Mohammad Forat Yazdi, Mohammadreza Vahidfar, Hasanali Vahedian

Department of Gynecological Oncology, Shahid Sadoughi University of Medical Science, Yazd

Introduction: Breast cancer is the most common cancer in pregnant and non-pregnant women. It also occurs in one out of 3000 to 10000 delivery. The aim of this study is the evaluation of perinatal and maternal outcome in women with pregnancy associated breast cancer.

Method: case series were reviewed retrospectively, which included 9 pregnant women diagnosed with cancer in shahid sadoughi hospital from 2002 to 2012. Data collected comprised demographics, pregnancy characteristics and outcomes, type of cancer, clinical stage, treatment and oncological outcome.

Result: The mean age of patients was 30.6 years, and the mean gestational age at diagnosis was 24.8 weeks. Surgical treatment was performed in all patients (3 modified radical mastectomy, 5 breast conserving surgery and 1 patient did not accept radical surgery and performed mass excision). 8 patients were treated by chemotherapy, and in 3 by both. 4 patients were diagnosed in stage 2, 2 patient were in stage 1 and 2 of patients were in stage 3 and one patients was in stage 4. Exclude one patient who did not accept any treatment, all of 8 gave chemotherapy during trimester 2 and 3 of pregnancy. 3 patients gave anthracycline regimen and 5 gave a taxan. The patients who did not accept treatment died 18 months after delivery, but the other ones are alive and the disease are controlled. The neonates had normal weight (2100-3250g). The babies are normal after 12-24 months after delivery as neurological and diagnostic problem.

Conclusion: Pregnancy associated breast cancer is coming more these days due to increasing childbearing age. Also because radiotherapy is contraindicated in pregnancy, doing modified radical mastectomy should be done. Also chemotherapy during the second and the third trimester can be performed. Early diagnosis of breast cancer by performing biopsy in breast masses which are persistent more than 2 weeks during pregnancy help the women to have lower stage of tumor, better survival and the best quality of life.

Key words: Breast cancer, Management, Maternal, Outcome, Perinatal, Pregnancy

The Relationship between Modified Biophysical Profile, Standard Biophysical Profile, and Neonatal Outcomes of High-risk Pregnancies

Marzieh Lotfalizadeh, Nayereh Ghomian, Mohammad Momeni

Introduction: High-risk pregnancies can result in many complications for the fetus. In these pregnancies, different tests such as non-stress test (NST), biophysical profile (BPP), oxytocin contraction stress test (OCT), and Doppler sonography can be used to evaluate fetal health. As standard BPP requires more time and expertise, in this study, we evaluated the relationship between standard BPP, modified BPP,

and neonatal outcomes. Therefore, in case there was a significant relationship, we could use modified BPP as a replacement for standard BPP.

Methods: Overall, 106 high-risk pregnant women in their third trimester, who were admitted to the gynecology ward of Imam Reza Hospital, were included in this study. Unless the subjects had any problems leading to emergent termination of pregnancy, standard BPP and modified BPP were concurrently performed to evaluate fetal health; these tests were repeated once or twice a week. In case of delivery, the last BPP scores (both standard and modified) were compared with the neonatal outcomes.

Results: In the evaluation of the last standard BPP scores, 83.1% and 16.9% of the patients obtained normal and abnormal scores, respectively; on the other hand, 73.6% and 26.4% of the patients obtained normal and abnormal scores in the last modified BPP, respectively. There was a significant relationship between neonatal outcomes and standard BPP results ($P=0.05$). Also, the relationship between standard BPP and modified BPP was significant ($P=0.003$). However, there was not a significant relationship between modified BPP and neonatal outcomes.

Conclusion: As the results indicated, modified BPP score had a significant relationship with standard BPP score, and standard BPP score had a significant correlation with neonatal outcomes. Therefore, the modified test can replace the difficult and time-consuming standard method. In addition, if the modified test showed any abnormalities, standard BPP or other fetal health evaluation methods should be applied.

Keywords: High-risk pregnancy, Modified biophysical profile, Neonatal outcome, Standard biophysical profile

The Review of Body Mass Index Measurements during the First Prenatal Checkup at Healthcare Facilities in Rural Areas of Hormozgan, Iran

A. Mobarakabadi¹, Zlaikha Sadeghi², Sohaila Moradi³

1. Health Center, Department of Maternal Health Program, Hormozgan University of Medical Sciences
2. Health Center, Maternal Health Program, Hormozgan University of Medical Sciences
3. Health Center, Director of Family Health, Hormozgan

University of Medical Sciences

Introduction: Early identification of women, who are at risk of malnutrition, is effective for the prevention and management of complications. Maternal body mass index (BMI) in the first prenatal checkup can be an indicator of the nutritional status of pregnant women. This study aimed to review the BMI status of pregnant women during the first prenatal checkup at healthcare facilities in rural areas of Hormozgan, Iran.

Methods: In this cross-sectional study, data were collected by the form of prenatal care. The study sample included all mothers attending rural health center of Hormozgan (10,649 people). Data analysis was performed using SPSS version 19.

Results: The survey showed that 51.94% of maternal BMIs were in the normal range, 18.20% were in the lean range, 9.31% were in the overweight range, and 5.77% were in the obesity range; in 14.79% of the cases, the BMI was not measured.

Conclusion: Based on the results of the present study, 33.28% of the studied women in rural areas of Hormozgan had abnormal BMI. Given the role of BMI in the desired amount of weight gain during pregnancy and its impact on the prevention of complications such as low birth weight, prematurity, and childhood obesity, providing suggestions regarding appropriate weight gain during pregnancy is among the basic measures that should be considered during the first checkup.

Keywords: BMI, Malnutrition, Pregnancy

Anterior Urethral Valve and Diverticulum in a Neonate with Urinary Tract Infection

Jalil Moshari¹, Anoosh Azarfar²

1. Pediatric Nephrology Resident, Dr Sheikh Hospital, Mashhad University of Medical Sciences
2. Associate Professor, Dr Sheikh Hospital, Mashhad University of Medical Sciences

Introduction: Anterior urethral valve (AUV) is a rare congenital anomaly that can cause obstructive uropathy. AUV can lead to variable urinary tract symptoms, and if left untreated, it can result in end-stage renal disease. AUV should be immediately evaluated and managed.

Herein, we present a neonate with AUV and diverticulum, who was treated by cystoscopy.

Case report: A 11-day-old boy was referred to the nephrology department for evaluation of urinary tract infection, which was developed 2 days prior to admission. Pregnancy and routine ultrasound (US) were normal, and urinalysis showed pyuria. Routine investigations included blood urea nitrogen, serum creatinine, electrolyte panel, urine analysis (UA), and urine culture (UC). Abdominal US examination displayed a normal bladder with normal kidneys. A voiding cystourethrogram (VCUG) showed an anterior urethra diverticulum with dilation of the proximal urethra and trabeculated bladder; however, no vesicoureteral reflux was observed. Finally, the patient underwent endoscopy.

Discussion: AUV is a congenital mucosal fold, located distally to the membranous urethra. AUV can be located anywhere distal to the membranous urethra and is found in bulbar urethra (40%), penoscrotal junction (30%), pendulous urethra (30%), and occasionally in the fossa navicularis, respectively. The exact etiology of this disease is unclear. AUV with associated diverticulum is a rare congenital urethral anomaly that can lead to penile swelling, urethral obstruction, urinary retention, incontinence, nocturnal enuresis, bladder rupture, and end-stage renal disease. Depending on the severity of anatomical obstruction, this condition may present soon after birth or later during childhood. VCUG is the most important imaging technique for the evaluation of urethral abnormalities. Congenital AUV in children has a generally good prognosis, but may occasionally result in poor renal outcomes such as renal insufficiency, renal failure, and patient's death.

Keywords: Anterior urethral valves, Urinary tract infection

Lumbar Puncture in Neonates with Sepsis

Reza Saeedi¹, Simin Maghrebi², Gholamali Maamouri³

1. Associate Professor of Neonatology, Neonatal Research Center, Imam Reza Hospital, Faculty of Medicine, Mashhad University of Medical Sciences, Mashhad, Iran
2. Resident of Neonatology, Mashhad University of Medical Sciences, Mashhad, Iran
3. Professor of Neonatology, Neonatal Research Center, Imam Reza Hospital, Faculty of Medicine, Mashhad University of Medical Sciences, Mashhad, Iran

Introduction: Infections are one of the main causes of death during childhood. According to

epidemiological studies in Iran, the incidence of neonatal sepsis was 1.8% in year 1995. Moreover, the incidence of neonatal meningitis was 0.2 to 0.4 in 1000 live births. The aim of this study was to determine the necessity of lumbar puncture (LP) for early neonatal sepsis.

Methods: In a retrospective study, after obtaining the ethical approval, we evaluated the records of 1100 neonates younger than 7 days, who were admitted to the hospital in 2001-2007 with sepsis suspicion; all the subjects had undergone LP. Statistical analysis was performed using SPSS version 16. Nominal variables were compared by Chi-square or Fisher's exact test. Other parametric and non-parametric tests were carried out, as required.

Results: In our study, 1100 neonates suspected of sepsis were evaluated. Overall, 28.3% and 71.7% of the subjects were older and younger than 3 days (male-female ratio of 1:5). In 115 neonates, sepsis was confirmed by positive blood culture and 21 neonates (2.1%) had positive cerebrospinal fluid (CSF), which was significantly associated with blood culture results.

Conclusion: There was a significant relation between blood culture and CSF culture. With regard to the low incidence of positive CSF, LP should be performed for each case, based on clinical manifestations and the clinician's opinion.

Keywords: Lumbar puncture, Neonatal sepsis, Neonate

Maternal mortality: A challenge in achieving Millennium Development Goals

Hamed Ghazavi¹, Mina Ahadi², Reza Saeedi²

1. Department of Modern Sciences and Technologies, School of Medicine, Mashhad University of Medical Sciences, Mashhad, Iran
2. Vice Chancellery for Health, Mashhad University of Medical Sciences

Introduction: Reducing the labour by an unskilful person is an important strategy in promotion of mother's health and reducing the maternal mortality as the fifth millennium development goals.

Methods: This retrospective and descriptive study was accomplished in 2010. The samples were 189 Iranian mothers with labour by unskilful person

in urban and rural area affiliated to Mashhad University of Medical Sciences. The data was gathered through a researchers made questionnaire and filled by interview or using medical records and analyzed by SPSS 11.5.

Results: The results showed that the average age of mothers was 29.6 ± 7.6 . The lowest and highest age was 16 and 49 respectively. The majority were illiterate or had primary education level (91.2%). About 68.1% of deliveries were in rural area. The most cause of labour at home was due to fast delivery (26.9%).

Conclusion: According to results, recommending to mothers to have safe delivery in equipped centers and recruiting skillful midwives for home delivery are key strategies in reducing labour by unskillful person which can be efficient in reducing maternal mortality for achieving the MDG5.

Keywords: Home delivery, Millennium Development Goals (MDG)