Introduction: Malignant melanoma is a growing problem in pregnant women population. Incidence in literature is from 2.8–10/10 000 pregnancies. *Objective:* Aim was to see the rate of it in our maternity ward, during the period of 12 years, and outcome of it, toward mother and neonate. *Materials and methods:* Maternity ward of Clinic Narodni front, Belgrade, had 33 (11 first time diagnosed, 22 imported) cases of melanoma in last 12 years (83 243 deliveries; 3.96/10 000). Ones diagnosed during pregnancy-none had any malignancy before. Average gestation of diagnosis 23 weeks. *Clinical cases or summary results:* Four delivered vaginally, seven by caesarean section (CS). Conservative treatment in three, conservatively + surgically in three, and surgically in five cases. Surgical treatments-performed in our clinic. Chemotherapy of all in Institute Of Oncology, CCS supervised by an obstetrician. Average term of delivery – 33 weeks, 4 days; Apgar score 7.1/8.0; average body mass 2370 g; duration of hospitalization 9.1 days. One newborn had cutaneous markings-malignant-transferred during cordocenthesis operated 1 day after delivery. Four women died in 5-year period, 1 in 10-year period. Six are still in screening protocol. Three had another child after. Surgical treatment had eight – operations depended of localization and level of malignancy. One patient treated urgently after delivery – metastases inside of the eyeball-removed. *Conclusions:* Malignancy level was high at the diagnosis. Therapy-radical and prompt-problem of saving the mother, her fertility and after that pregnancy. Incidence growth – 330% in 12 years – the most vigorous problem for obstetricians, surgeons and pediatricians in time to come, concerning malignant diseases.

THE ROLE OF CERVICAL LENGTH CHANGE FROM FIRST TO SECOND TRIMESTER OF PREGNANCY FOR THE PREDICTION OF PRETERM DELIVERY

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Introduction: The purpose of this study was to compare cervical length at 11–13 + 6 weeks of pregnancy with that at 21–23 + 6 weeks and observe the changes of the cervical length during that period, in a low risk asymptomatic population, with singleton pregnancies in order to investigate the predictive value of these changes for preterm delivery. *Method:* A prospective study, with 1021 asymptomatic, low risk women with singleton pregnancies. Cervical length was measured with transvaginal ultrasound at 11–13 + 6 weeks and repeat measurement was performed at 21–23 + 6 weeks. Information about the outcome of pregnancy was obtained in 833 women, which was our final study population. Student's *t*-test was used to compare mean values of cervical length for women who delivered before and after 37 weeks. Mann–Whitney test was used to compare values that did not have normal distribution. Wilcoxon signed rank tests were used to check the differences of the cervical lengths for the two periods (first and second trimester). *Results:* From the women with preterm delivery, 59 (7.1%) women delivered before 37 weeks and 17 (2%) delivered before 34 weeks. There were no significant differences for the age of the mother, smoking, body mass index and cervical surgery among women who delivered before and after 37 weeks. The mean cervical length was 40 mm (37–44) and 37 mm (33–40), respectively for 11–13 ± 6 and 21–23 ± 6 weeks. Shortening of the cervical length was statistically significant both for women who delivered before and after 37 weeks. Respectively, shortening of the cervical length was statistically significant both for women who delivered before and after 37 weeks. Mean maternal age was 29.5 years (SD 5.1 years). *Conclusion:* Cervical length change between first and second trimester of pregnancy does not appear to have a statistical significant difference for women who delivered before and after 37 weeks and does not appear to have a predictive value for preterm delivery.

COMPARATIVE STUDY BETWEEN 2-D AND OFF-LINE 3-D ULTRASOUND DURING THE 1ST TRIMESTER SCAN

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Aim: To evaluate the use of three-dimensional (3D) off-line ultrasonography as an alternative for examining fetal anatomy and nuchal translucency (NT) in the first trimester of pregnancy. *Method:* A prospective study of 1007 low risk singleton pregnancies at 11–14 weeks of gestation. The gestational age, NT and fetal anatomy (10 anatomic features) were evaluated by off-line 3D ultrasonography after the standard two-dimensional (2D) examination. The results of the two methods were compared using the 2D as a gold standard. *Results:* In some of the evaluated parameters the 3D method approximates the conventional 2D results. These parameters are the crown-rump length (CRL), the skull–brain anatomy (96.8%), the spine (89.7%), the upper limb (91.1%) and lower limb (87%) and the fetal abdomen (98.5%). Some of the anatomic features revealed statistically significant differences in favor of the 2D examination such as the nasal bone (70.6% with the 3D), the stomach (79.6%) and the urinary bladder (59.6%). The NT was measured with the 3D in 87.5% of cases; although in only 60% values were accurate to the corresponding 2D. *Conclusion:* The off-line assessment of 3D ultrasound volumes can accurately date gestation and satisfactorily visualize fetal anatomy in about 75% of cases. Yet it seems insufficient for the first trimester examination.

CLINICAL EFFICACY AND COST-EFFECTIVENESS OF HUMAN RECOMBINANT INTERLEUKIN-2 IN NEONATAL INFECTIONS

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Background: Lymphopenic episodes during severe neonatal infections are signs of immune deficiency and predictors of lethal outcome. *Aim:* To assess clinical efficacy and cost-effectiveness of human recombinant interleukin-2 (Ronkoleukin®, Biotech Ltd, Russia) in neonates with severe infections and lymphopenia in neonatal intensive care unit (NICU). *Materials and methods:* We observed 145 neonates (gestational age [GA] 25–41 weeks) with severe early-onset bacterial infections in NICU. The patients were divided into two groups: group 1 included 85 newborn infants with sepsis and lymphopenia treated with Roncoleukin; group 2 consisted of 60 neonates with sepsis and lymphopenia under standard treatment without additional immunotherapy. Initially neonates of both groups were comparable with regard

to GA, anthropometry and clinical characteristics. Indication for Roncoleukin administration is the low total lymphocyte count in peripheral blood (<2 × 109/L) of newborn infants with severe infections. Roncoleukin was administered intravenously in a single dose 100 mg/kg/day at a rate <6 mL/h during 2 h twice per course, the interval between two infusions – 72 h. Effectiveness data were used to populate a decision model to estimate the cost-effectiveness of Roncoleukin and standard therapy. Direct and indirect costs were measured. Published cost data were applied to assess differences in treatment costs. *Results:* Lymphopenia was observed in 39% [30%; 49%] neonates with severe early-onset neonatal infections. Administration of human recombinant interleukin-2 to neonates with sepsis and lymphopenia reduces NICU length of stay and mortality rates from severe infection (ð = 0.047; Odds ratio = 0.36 [0.13; 0.98]; relative risk = 0.41 [0.17; 0.98]; NNT = 9 [4; 214]). Roncoleukin administration for severe early-onset neonatal infections with lymphopenia led to a reduction of direct costs per patient by 10% (in total direct costs per patient were ~9137 and ~10 570 for Roncoleukin and control groups, respectively). Sensitivity analyses showed robustness of the data. Roncoleukin administration in early-onset neonatal infections with lymphopenia leads to substantial cost savings (up to ~60 910 per patient). *Conclusion:* Intravenous administration of human recombinant interleukin-2 in addition to standard treatment of severe neonatal infections complicated with lymphopenia is a pathogenetically based and cost-effective intervention that allows to reduce mortality rates and save money.

INFLUENCE THE LENGTH OF HOSPITAL ADMISSION OF WOMEN WITH THREATENED PRETERM LABOR?

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Objective: We previously showed that maintenance tocolysis with nifedipine neither prolongs pregnancy, nor improves perinatal outcome (APOSTEL-II trial, oral presentation SMFM February 2010). We would like to test the hypothesis that the outcome of this trial influenced duration of hospital admission of women with threatened preterm labor in The Netherlands. *Study design:* In this retrospective analysis, we evaluated duration of hospital admission of all patients admitted with threatened preterm labor or preterm premature rupture of membranes with a gestational age <32 weeks. All perinatal centers in The Netherlands participated in the APOSTEL-II trial and were included in this analysis. Length of admission was compared in the period before start of the APOSTEL-II trial, during recruitment for the trial, and after recruitment had been completed. We corrected for different start dates of the recruitment period. Readmissions for threatened preterm labor were not included in this analysis. To correct for other factors which could influence length of admission, we evaluated length of admission of patients admitted in the 2 months before start of the trial and in the 2 months directly after completing the inclusions. *Results:* Per year, an average of 190 patients with threatened preterm labor were admitted in each perinatal center. The mean length of hospital admission was 9.5 days before the start of the trial, 8.6 days during the recruitment period and 8.2 days after the trial was completed. These differences were significantly different ($p < 0.05$). The mean length of hospital admission during the 2 months before and after the APOSTEL-II study were 9.3 and 8.5 days, respectively. *Conclusion:* Our results show that performance of the APOSTEL-II trial, that showed that maintenance tocolysis is not effective, reduced length of hospital admission for preterm labor.

CONTINUOUS GLUCOSE MONITORING IN NEWBORN

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Background: Hypoglycemia is the most common metabolic disorder of newborns. The definition of hypoglycemia remains one of the most confused and contentious issues in contemporary neonatology. Hypoglycemia was defined as a subcutaneous sensor glucose level <2.2 mmol/L (<40 mg/dL). The problem is that neonatal clinically significant hypoglycemia has been related to poor neurodevelopmental outcome. *Objective:* To determine whether the use of continuous subcutaneous glucose monitoring (CGMS) will help in detecting unnoticed hypoglycemia and to determine it reliability in the newborn. *Methods:* Six full term newborn infant ingressed in our Neonatal Unit were monitored with the CGMS during 72–96 h. The CGMS comprises a disposable, glucose oxidase based, platinum electrode sensor which catalyses interstitial glucose oxidation generating an electrical current every 10 sec, which is recorded via a cable by a pager sized monitor. Although the sensor measures the concentration of interstitial glucose every 10 sec, the monitor records averaged values every 5 min, giving a total of 288 readings a day, and is considered continual. It was inserted by hand into the subcutaneous tissue of the lateral aspect of the thigh using an aseptic technique. *Results:* Although most of the children show no severe or asymptomatic hypoglycemia in the period of studio, in two cases it was possible to find asymptomatic hypoglycemias, which make possible a better treatment. In one of them steroidal therapy has shown to be effective. *Conclusions:* (i) The use of CGMS is safe and were well tolerated by our patients. There was no evidence of local oedema, inflammation, or infection at the sensor sites in any baby. (ii) CGMS in newborn would provide much needed data to determine the incidence, severity and duration of low glucose concentrations, their relationship with symptoms and correlation with neurodevelopmental outcome. (iii) Monitoring would help us discover recurrent episodes of hypoglycemia that might be predictive of serious metabolic disease or hyperinsulinism and determine when such infants had achieved glucose homeostasis sufficient for safe discharge. (iv) In infants requiring treatment, CGMS would be a potential means for determining when low glucose concentration had been corrected, how stable they were during treatment, and when treatment could be safely discontinued.

PERINATAL HYPOXIA, AN ACTUAL HEALTH PROBLEM

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Introduction/background: In 2006, OMS reported that about one-third of death in children under 5 years is in the first week of birth, involved in 2004, 2.8 million of death. While an OMS report in 2008, the mortality of perinatal asfhyxia in Colombia was about 7%. The newest report from 15 to 20% of the newborn that have asfhyxia during this moment or in a short period near,