which after six months were 71.14% higher, despite CEA values that were in referent range.

Conclusions: Because of low sensitivity tumor markers CA 15-3 and CEA are more suitable for monitoring of state of patients after surgery than for early screening or diagnosis of breast cancer.

P19 - Pregnancy

P19-01

Results of first trimester screening for Down's, Edward's and Patau's syn using SsdwLab5 software

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Background: First trimester screening is indispensable in early identification of Downs, Edwards and Pataus syndrome in fetuses. We performed combined protocol which included: maternal biochemistry (free beta-hCG and PAPP-A) and sonografic determination of nuchal translucency (NT) during year 2011. Screening was performed between 11+0 and 13+6 weeks of pregnancy. Risk calculation was performed using the software SsdwLab version 5.0. This software makes use of an algorithm described by Palomaki and is based on the mathematical calculation using Gaussian multivariate distribution. Risk analysis is based on maternal age, NT as well as on the results of biochemical parameters, corrected by different factors like e.g. maternal weight, smoking and ethnic background of the pregnant woman.

Materials and methods: Free beta-hCG and PAPP-A were performed by electrochemiluminescence immunoassay on COBAS E 411 immunoassay analyzer.

Results and conclusions: Total of 1459 samples from clinical routine with known outcome were examined in year 2011. 42 out of the 1459 samples were from pregnancies with confirmed Down's syndrome. 8 out of the 1459 samples were positive for Edward's or Patau's syndrome. Cut-offs for Trisomy 21 and 18-13 were 1/250.

P19-02

The role of antenatal screening and amniocentesis on the Down's syndrome diagnosis – our experiences

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Description: Antenatal screening identifies high risk pregnancies for Down's Sy. The screen includes the risk assessment based on data processing of the maternal serum PAPP-A and Fß-hCG and the NT. It is performed between 11w0d-13w6d of gestation. According to the risk assessment women are distinguished into the high risk group (> 1/250) screen positive, and low risk group (< 1/250) screen negative.

Aim: Assessment of correlation between the screening high risk pregnancies and the amniocentesis in our center.

Material and methods: Study included 472 pregnant women tested between 02/2011-04/2012, 22-42 years, gestation 11+0 to 13+6 weeks. The testing of the maternal biomarkers has been performed on Roche Elecsys2010. Measurement of the NT has been performed by Toshiba-XarioXG ultrasound. The risk has been calculated on FMF's software, where the woman age, CRL, parity, smoking, BMI and ethnic origin has been evaluated too. Amniocentesis has been performed between 17w 1d-20w 6d weeks of gestation on ultrasound guided free hand technique using the 22G needle.

Results: Among 472 tested, with the high risk on Trisomy21 (> 1/250) resulted 26 (5.5%) which then have been recommended for amniocentesis. 23 of 26 woman have undergone the amniocentesis whilst 3 refused the procedure. Among 23 performed amniocentesis 2 of 23 (7.69%) or (4.2‰) cases of the total number tested, resulted with Trisomy21 and have been referred for pregnancy termination.

Conclusions: Antenatal screening is a non invasive test, able to be realized in the early gestation, technically easy to be performed and cost effective.

P19-03

Standard and new laboratory markers and their usefulness in prediction of preeclampsia

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Background: Syndrome preeclampsia occurs in 5 to 8% of pregnancies and is a leading cause of maternal and neonatal morbidity and mortality. There are no clinically available tests that perform well in predicting development of preeclampsia at the moment. The aim of this study was to investigate the predictive potential of standard laboratory parameters and to evaluate new angiogenic markers at third trimester of pregnancy in prediction of preeclampsia.

Patients and methods: First, retrospective designed study included 113 patients with preeclampsia and a control group of 95 uncomplicated pregnancies. It evaluates erythrocytes, leukocytes, thrombocytes, hemoglobin, hematocrit, AST, ALT, GGT, alkaline phosphatase, total bilirubin, urea, creatinine, uric acid, body mass index, parity, age, and blood type in prediction of preeclampsia based on multivariate logistic regression model. In the second, prospective study data from 34 patients with preeclampsia and 35 patients with uncomplicated pregnancies were evaluated. New angiogenic markers, PlGF, s-Flt-1 were evaluated together with standard laboratory parameters, the same way as in the first study.

Results: When parameters such as uric acid and urea were included into logistic regression model, we correctly classified 79.6% patients. Additional parameters (thrombocytes, hematocrit, aspartate aminotransferase and leukocytes) raised correct classification to 83.8% patients and employing PlGF, sFlt-1 with other parameters, percentage of correctly classified patients reached 94,3%.

Conclusion: Standard laboratory parameters, when used as laboratory test panel have significant prognostic value in the prediction of preeclampsia, but new angiogenic markers showed to be superior and can sucesfully predict occurence of preeclampsia at lower gestational age.

P19-04

Comparison of the „SsdwLab 5.0.9“ and „Fetal Medicine Foundation“ Down syndrom screening softwares

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Background: First trimester screening by a combination of maternal age, fetal nuchal translucency and maternal serum free-β-hCG and PAPP-A can indentify about 85-90% of fetuses with trisomy 21 and other mayor aneuploidies. The aim of this study was to compare risk calculations perfomed using two different softwares.

Materials and methods: PAPP-A and free-β-hCG concentrations were measured by electrochemilu-

minescent immunoassay (ECL) on Roche Elecsys analyzer. The obtained results were within the target values of internal and external quality assurance programme (UKNEQAS scheme for First Trimester Downs Syndrome Screening). Nuchal translucency was measured by sonographers with FMF Certificate of Competence. Risk calculations were performed using „SsdwLab 5.0.9"(Roche, certified by FMF) and „Fetal Medicine Foundation" softwares.

Results: Patients (N = 247) were devided into high, intermediate and low risk grupe. The obtained distributions per group were: high risk 18 (7.29%), intermediate risk 36 (14.57%) and low risk 193 (78.14%) patients using SsdwLab 5.0.9 software vs. high risk 12 (4.86%), intermediate risk 26 (10.53%) and low risk 209 (84.61%) patients using FMF software. 18 patients were classified as high risk by SsdwLab 5.0.9 vs. 10 (55.6%) as high risk and 8 (44.4%) as intermediate risk using FMF software. Only one fetus from the high risk group (by both softwares) was trisomy 21 positive, which was confirmed by amniocentesis.

Conclusions: Comparing risk calculations performed using „SsdwLab 5.0.9" and „Fetal Medicine Foundation" softwares, we concluded that SsdwLab 5.0.9 calculates higher risks for the same input parameters. Further research will be aimed at discovering the causes of observed differences.

P19-05

What do the triple test results mean?

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Introduction: The triple test is a screening test and not a diagnostic test. This test only notes that a mother is at a possible risk of carrying a baby with a genetic disorder The triple screening test is performed between the 14th and 22nd week of pregnancy. This test is recommended for women who have a family history of birth defects, are 35 years or older.

Materials and methods: These results represent three years study of screening for genetic disorders (trisomy 21, trisomy 18 or another tip of chromosome abnormality). Triple screening test is a combination of maternal age, weight, ethnicity, gestation of pregnancy, biparietal diametar (BPD) and serum total HCG, AFP and unconjugated estriol. We analysed 168 serum samples from pregnant women at the second trimester by Immulite 1000 (Siemens, risk assessment software PRISCA 4). The distribution of estimated risks for trisomy 21 was determined and sensitivity and false-positive rate for a risk cut-off 1 in 250 were calculated.

Results: The average maternal age was 30 (range 16-44) years and in 26 (15%) the age was 35 years or more, the average gestation at screening was 15.9 (14-22) weeks and average of BPD was 35 (range 29-56) mm. The estimated risk for trisomy 21 based on mentioned parameters was 1 in 250 or greater in 3.0% (4 of 168) of pregnancies.

Conclusion: Our result of screening for chromosome abnormality by measuring of fetal BPD and maternal biochemical parameters are similar to those reported in literature.

P19-06

Analysis of biochemical parametars in the perinatal screening

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Introduction: The pregnancy is specific condition of the body followed by a number of changes and different physiological states, so that a phenomenons that are the subject of this study is gestational diabetes and pregnancy induced hypertension. Aim of this study was to determine whether the deviations from the reference values of β-human-chorion gonadothropin and pregnancy-associated plasma protein-A are correlated with certain disorders of pregnancy such as pregnancy-induced hypertension, or gestational diabetes, and whether these parameters can be used in the prediction these complications in pregnancy.

Materials and methods: In these study are analised 50 pregnant women. In the control group were 20 physiologically healthy pregnant women; in the study group of fifteen pregnant women (50%) had established PIH, and the other fifteen (50%) were diagnosed with gestational diabetes. Biochemical analysis was done by testing the imunofluoroscency (Wallac DELFIA Xpress). Results are expressed as multiples of median (MoM) specific gestational age.

Results: In these research found no discrepancy between the values of biochemical parameters in the study and control group. The value of βhCG and PAPP-A at physiologically normal pregnant women and pregnant women diagnosed with PIH and gestational diabetes had no significant deviation.

Conclusions: Based on analysis of data in the form of biochemical screening of pregnant women age and number of deliveries we could not see a significant shift in the diagnosis and prediction of when it comes to certain complications of pregnancy such as gestational diabetes and pregnancy induced hypertension.

P19-07

SNP's in LEP gene and LEPR gene are associated with recurrent spontaneous abortions (RSA)

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Aim: Single nucleotide polymorphisms (SNP) in leptin (*LEP*) and leptin receptor (*LEPR*) genes were compared between a group of female patients with more than three recurrent spontaneous abortions (RSA) and women with two or more successful pregnancies (SP).

Materials and methods: In a cohort study 145 women with SP and 178 women with RSA were tested. Genotype of four SNP's in LEP (rs7799039, rs2122627, rs11761556, rs10244329) and four SNP's in LEPR (rs1137101, rs7516341, rs1186403, rs12062820) were determined using KASP SNP Genotyping system and ABI Prism 7000 SDS instrument. Statistical comparison was done using Chi–square statistic. The haplotype frequencies and haplotype–disease associations were estimated using haplo.stats package.

Results: The genotype frequencies did not deviate from HWE, except in the case of one *LEP* and two *LEPR* SNPs. In the case of rs7799039 P value for RSA and all examinees was 0.03. The recessive model (AG + GG/AA) revealed significant association between 2548A genotype and RSA (OR = 1.58). Also, two SNPs from intron region of LEPR

(rs7516341 and rs1186403) deviated from normal distribution. In dominant model (CC + TC/TT) of the first SNP allele C decreases risk of RSA (P = 0.034, OR = 0.61). The second SNP was significantly different for SP group (P = 0.008) where T allele is of limited protective effect in the recessive model of inheritance (Chi-square P = 0.082, OR = 0.51).

Conclusion: It is known that mother's BMI during pregnancy influence maternal and newborn health. *LEP* and *LEPR* are candidate genes for RSA and therefore their influence on mother's BMI during pregnancy and final outcome of pregnancy deserves further investigation.

P19-08

The effect of pomegranate seed oil on histological features of testis and sperm quality in male rats

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Background: Pomegranate fruit extracts have been commonly marketed as dietary supplements in recent years because its health benefits have been shown in many studies. Many investigators have shown that the pomegranate possesses antioxidant activity and may act as a free radical scavenger.

Materials and methods: POMo (pomegranate seed oil) was extracted by petroleum ether. Male Wistar rats were divided into four groups (six per group). One milliliter corn oil, 200, 500 and 1000 mg/kg body weight POMo were given daily for seven weeks by gavage to first- 4th groups, respectively. After this period of time, epididymal sperm were collected and the indexes of sperm quality were determined in all groups. The lipid peroxidation levels and the reduced glutathione contents of sperm were measured. The Diameter of seminiferous tubules (µm) and germinal cell layer thickness (µm) of testis were determined.

Results: A significant increase was found in the percentage of forward progressive sperm motility and a significant decrease was found in the percentage of sperms with slow movement in rats treated with different doses of POMo. The epididymal sperm concentration in rats that eat POMo was higher than control group. The biochemical investigation showed that POMo increased the level of reduced glutathione and decreased the level of lipid peroxidation in the sperm. The Diameter of seminiferous tubules (µm) and germinal cell layer thickness (µm) were higher in treatment rats.

Conclusion: This study shows potential effect of POMo on sperm quality and may use for increasing the fertilizing potency of sperm.

P20 - Renal replacement

P20-01

Monitoring serial creatinine results in kidney transplant patients using the StatSensor POCT device

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Background: Reference Change Values (RCVs) are helpful to interpret changes in serial diagnostic results. After renal transplantation creatinine is monitored frequently to detect rejection. To judge the usefulness of a device for home monitoring of creatinine, StatSensor POCT device (Nova Biomedical)