

group – 30 women with a first episode of miscarriage in I trimester. Determination of the concentration of diene conjugates (DC), malondialdehyde (MDA) and catalase levels were determined spectrophotometrically using a spectrophotometer “SF-46”, “Solar” PV1251C. In assessing the performance of lipid peroxidation in women with a first episode of miscarriage had significantly decreased concentrations of DC and MDA in 1.3 and 1.4 times, respectively. According to our data, the average values of catalase activity in blood plasma of pregnant women in the control group made  $33.18 \pm 1.92$  mmol H<sub>2</sub>O<sub>2</sub>/min/g Hb. In women, the main group catalase activity was  $21.66 \pm 1.82$  mmol H<sub>2</sub>O<sub>2</sub>/min/g Hb was significantly reduced relative to the control group ( $p < 0.05$ ). Thus, the trigger factor in the initiation of interruption of the first pregnancy is the change in prooxidant-antioxidant homeostasis, and the severity of metabolic disturbances in the process of implementation of the redox desynchronization is the impetus for the formation of violations of biochemical processes at the cellular, tissue, organ and organism level, which calls for development new therapies.

### **P254 Suprarenal mass in mother and foetus – imaging and differential diagnostics**

Eliska Lackova (SK), Anton Cunderlik (SK), Zuzana Seresova (SK), Igor Rusnak (SK)

University Hospital Bratislava, Slovakia

*Context:* Adrenal hyperplasia in mother and the prenatally confirmed adrenal mass in fetus complicated by perinatal asphyxia and postnatal development.

*Objective:* Prenatal imaging have led to an increased rate of diagnosis of suprarenal tumors. It is important to differentiate benign from malignant adrenal lesions. MRI is the modality of choice for differential diagnosis.

*Patient:* 22-Year-old primipara referred for assessment of fetal suprarenal mass at 27 weeks of gestation. In her medical history at the age of 20 years CT scan confirmed bilateral adrenal hyperplasia. The diagnoses of late CAH was not confirmed. In foetus a suprarenal cystic mass was confirmed with no blood flow. MRI confirmed cystic formation with haemorrhagic content. Planned follow-up sonography was not performed due to praemature delivery at 35 week of gestation. Labour was complicated by perinatal asphyxia, foetus was delivered by forceps Apgar scores of 6/9. Catecholamins replacement and corticotherapy was initiated. CAH was supposed and the newborn was transferred to the perinatology center.

*Outcomes:* Postnatal USG confirmed the adrenal multilocular tumor, no clinical neither laboratory sign of CAH. The corticosteroid treatment was sequentially reduced, no medical neither surgical intervention was needed. The newborn is led in endocrinological medical care.

*Results:* As mother so the baby stays in the ambulatory medical care with no specific diagnosis, with confirmed mass in adrenal gland, with no hormonal pathological laboratory screening.

*Conclusions:* Diagnosis of neonatal suprarenal mass depends on prenatal USG, clinical manifestations, MRI. Dynamic observation of suprarenal mass by MRI and USG is means of differential diagnosis. While conservative therapy is suitable for adrenal hemorrhage, adrenal tumors need surgical excision. An appropriate initial assessment and a close follow-up in a specialized center.

### **P255 Can activation of TLR3 induce apoptosis in patients with miscarriages?**

Olga Lebedeva (RU)<sup>1</sup>, Irina Zhukova (RU)<sup>1</sup>, Victor Bashmakov (RU)<sup>2</sup>, Vasily Popov (RU)<sup>2</sup>

<sup>1</sup>Belgorod State University, <sup>2</sup>Voronezh State University

*Context:* Viral infection is capable to activate innate immune response through TLR3 (Lange M.J., Misfeldt M.L., 2009). In our previous study

(Lebedeva O. et al., 2013) it was shown, that expression of TLR3 in endometrium is significantly higher in patients with early miscarriages. *Objective:* To estimate influence of TLR3 activation on apoptosis proteins in endometrium in patients with miscarriages and missed abortions.

*Methods:* Endometrial tissue was received by uterine abrasion. Diagnosis was confirmed by histological examination. Expression of mRNA of Toll-like receptor 3 (TLR3), death receptors 4 and 5 (DR4, DR5), TRAIL, caspases (CASP) 1, 3, 8 and 9 was performed by quantitative polymerase chain reaction (PCR). Statistical analysis was performed by Mann-Whitney test and Spearman test by Statistica 10.0 (Statsoft, USA).

*Patients:* 22 Women with spontaneous abortion (group I), 22 – with missed abortion (group II), 57 – patients with medical abortion (group III, control) on 6–10 weeks of pregnancy.

*Results:* Expression of TLR3 in patients with missed abortion was 2.4-fold higher, and with spontaneous abortion – 1.7 fold higher, than in control group ( $p < 0.01$ ). Also 10-fold increase of expression of DR4 was observed in both groups with miscarriages ( $p < 0.01$ ). In case of missed abortion 3-fold increase of CASP-1 and 2-fold increase of CASP-9 ( $p < 0.01$ ), and in case of spontaneous abortion – 18-fold increase of CASP-3 mRNA expression ( $p < 0.01$ ) comparing with control group was observed. There were no significant differences between group I and group II in expression of proteins. Expression of TLR3 mRNA in cases of missed and spontaneous abortions had only moderate correlation with TRAIL ( $R = 0.66$ ;  $p < 0.05$  and  $R = 0.44$ ;  $p < 0.05$ ), but not with other apoptotic proteins.

*Conclusions:* Increased expression of TLR3 does not relate to activation of apoptosis through DR4/DR5.

### **P256 Can TLR3 influence to p53 and p63 apoptosis pathways in early miscarriages?**

Olga Lebedeva (RU)<sup>1</sup>, Irina Zhukova (RU)<sup>1</sup>, Victor Bashmakov (RU)<sup>2</sup>, Olesya Yakovleva (RU)<sup>1</sup>, Natalia Starceva (RU)<sup>3</sup>, Sergey Pakhomov (RU)<sup>1</sup>, Mikhail Churnosov (RU)<sup>1</sup>, Alexander Dolzhikov (RU)<sup>1</sup>, Inna Aristova (RU)<sup>1</sup>

<sup>1</sup>Belgorod State National Research University, <sup>2</sup>Voronezh State University, <sup>3</sup>Belgorod Municipal Clinical Hospital no. 1

*Context:* P53 protein activates apoptosis, while p63 can also promote cell-cell adhesion and epithelial proliferation. Toll-like receptor 3 responsible for recognizing double-stranded RNA of viruses.

*Objective:* To define the role of TLR3 in activation of p53 and p63 apoptotic pathways in patients with early miscarriages.

*Methods:* Endometrial tissue was received by uterine abrasion. Diagnosis was confirmed by histological examination. Expression of mRNA of Toll-like receptor 3 (TLR3), p63 and p53 was performed by quantitative polymerase chain reaction (PCR). Statistical analysis was performed by Mann-Whitney test and Spearman test by Statistica 10.0 (Statsoft, USA).

*Patients:* 22 Women with missed abortion (I group), 22 – with spontaneous abortion (II group), 57 – patients with medical abortion (III group, control) on 6–10 weeks of pregnancy.

*Results:* Expression of p53 and p63 was significantly higher in patients with missed abortion compared with control group. Expression of TLR3 had strong negative correlation with p53 ( $R = -0.99$ ;  $p < 0.05$ ). No significant correlation of TLR3 with expression of p63 was observed. In patients with spontaneous abortion only higher expression of p53 was observed. No significant correlation of p63 and p53 with TLR3 was discovered.

*Conclusion:* Thus, in patients with missed abortion TLR3 can influence to apoptosis, but not to cell-cell adhesion, through p53 pathway activation. In women with spontaneous abortions TLR3 does not influence to p63 and p53 pathways.

Supported by grant of Russian foundation of basic research №15–34–50467.