The relationship between gestational factors and SAH during pregnancy in Serbian population

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Objectives: Subarachnoid haemorrhage in pregnancy and puerperium is a rare entity but with high perinatal maternal and fetal mortality and morbidity. Most often it occurs suddenly and without warning, in completely normal pregnancies and its treatment, and the way of ending pregnancy, have a significant impact on maternal and fetal outcome.

The aim of the study was to examine the relationship and influence of gestational factors with the occurrence of subarachnoid haemorrhage in pregnancy.

Methods: This was a systematic, non-experimental, retrospective method. Monitored and analysed were parameters: age, parity, gestational age at the time of delivery, comorbidities (hypertension, coagulopathy, diabetes, heredity), mode of delivery, maternal and fetal outcome.

Patients: Our study included 18 pregnant women who were treated at the Neurosurgery Clinic, Clinical Centre of Serbia due to the occurrence of subarachnoid haemorrhage in pregnancy and puerperium in the period 2002 - 2012. The control group consisted of 30 pregnant women and selected was the random sample for the period 2002 - 2012, at the Gynecology and Obstetrics Clinic "Narodni Front".

Results: The analysis showed the existence of significant differences between the groups in terms of the number of pregnancies (t = 2.91, df = 24.08, p = 0.0076) and the number of previous vaginal deliveries (t = 2.93, df = 46, p = 0.005): these parameters were higher in the study group. Furthermore, pregnancy in the control group was always finished in the 3rd trimester, while in the study group the completion of pregnancy is possible in all trimesters. Also, hypertension (X² = 8.128, df = 1, p = 0.0043) and coagulopathy (X² = 12.481, df = 1, p < 0.001) were more frequently recorded in the study group. The analysis has shown fetal mortality is more frequent in the study group (X² = 16, df = 1, p < 0.001). However, the relationship between maternal mortality and the occurrence of SAH during pregnancy was not shown (X² = 1.702, df = 1, p = 0.192).

Conclusions: We found strong associations between gestational factors and the risk of emergence of SAH during pregnancy. Such findings suggests it is certainly feasible to invest efforts in monitoring and
analyzing this entity at the national level. Based on our research some practical recommendations can be provided for the medical treatment of women with SAH and also for the fetus.

Key words: gestational factors, subarachnoid haemorrhage, pregnancy