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Background and Aims: The worldwide prevalence of neurological and psychiatric illnesses is steadily increasing. Consequently women of childbearing age are affected as well. This survey examines the question of the effects these illnesses have prenatally on the mother and child, and analyzes parameters such as pregnancy, the birth process, and the welfare of the newborn. In future, interdisciplinary collaboration between gynecologists, pediatricians, neurologists and psychiatrists could be improved with the help of the results of this study.

Methods: In a case-controlled study, differences in pregnancy, birth process, and birth outcome were associated with a neurological or psychiatric illness in the expectant mother. 325 pregnant women with 331 born children were identified as cases, and were compared to 5,103 non-diseased pregnant women with 5,195 born children. All these parturitions took place in a Level 1 hospital of perinatal maximal care in Sachsen-Anhalt between 2010 and 2012.

Results: The age of the mother on admission was significantly lower in the case group than in the control group (p = 0.045). The number of previous gestations (p = 0.012) and the number of previous induced abortions (p = 0.002) were significantly higher in the case group. Also the BMI before pregnancy (p = 0.025) and the length of stationary stay (p = 0.001) showed significantly higher values in the case group. Previous spontaneous abortions and extraterine pregnancies showed no statistical significance.

Differences followed up as well with the Apgar Scores (Apgar1: p = 0.002, Apgar5: p < 0.001, Apgar10: p < 0.001), which were all significantly lower when the child’s mother was ill. The frequency of postpartum stationary stay in a children’s clinic (p < 0.001) as well as the length of stationary stay (p < 0.001) were also significantly higher when the mother suffered from a neurological or a psychiatric illness. No significant differences arose in parameters that were associated with arterial umbilical blood (pH and Base Excess), the length of parturition or the duration of expulsive stage.

Discussion: Many surveys pursue the issue of the effects different neurological and psychiatric disease syndromes have on pregnancy and nativity. But none of them deals with the question of their commonalities, such as the effects on the central nervous system and the organism of the affected women. The results show that in all areas, irrespective of impact on mother or child, the outcome is more fatal in the case group than in the control group. Starting with the number of previous gestations and the previous induced abortions, and ending with the significantly higher rate of hospital stays, case-group mothers and newborn children suffer from more difficult circumstances than the unaffected ones. In the end these findings show that it is not necessary to consider mother and child diagnoses separately to prove the assumption of more fatal outcomes in pregnancies with neuropsychiatric involvement. Therefore, one gain of this study is the future development of research that takes into account the welfare of mother and child as a unit – in contrast to those studies that focus on either the gynecological or the pediatric aspect of the birth. Prospectively both disciplines should work hand in hand to improve the health of mothers and their newborn children. Additionally neurologists and psychiatrists should also be consulted in the context of the pregnancy to guarantee optimal medical care.