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THE FACTORS OF A RISK OF THE FORMING OF CEREBRAL ISCHEMIA IN NEW-BORN CHILDREN OF TUVA REPUBLIC

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RESUME

150 women of the native nationality of Tuva Republic and their new-born children were examined with the aim of discovering of the risk factors of cerebral ischemia in new-born children. Analysis of the statistic meaning of the distinctions of the qualitative signs was made with the help of the criterion χ^2 with Yeits correction. The index of ratio of the chances with 95% confidence interval was used for risk calculation.

The discovered signs of pre-natal hypoxia during pregnancy increase a risk of acute ischemia of brain in 4,85 times in period of new-borning. Risk of the ischemic injury of central nervous system of a new- born child is increased in 2,92 times at a presence of the urogenital infection in a mother and twice - at a presence of anemia in a pregnant woman and a risk of misbirth.

Keywords: new-born children, cerebral ischemia, risk factors, prognosis.

Cerebral ischemia (CI) with hypoxia take a leading place, achieving 38,4-67,5 [1] in the structure of the perinatal sickness and mortality. Cerebral ischemia / hypoxia has got long-term (many years') consequence, and modern demographic situation demands constant perfection of aid to pregnant women and new-born children with the aim of decrease of perinatal sickness, mortality and prophylaxis of disablement since childhood. [2,4]. At the same time it's well

known that it's much easier to prevent development of cerebral pathology in new-born children than to treat it. [1,3,6].

The main element of work at the prognostication of hypoxic cerebral disturbances in new-born children is a comparison of peculiarities of process of pregnancy, labor (giving a birth) and early neonatal period with development of children during the first year of their life [5]. Clinical practice shows that neonatologists, dealing with the labor (giving a birth) in the most problematic new-born children, having clinical signs of CI and obstetricians, controlling pregnant women at the antenatal period, would like to know a risk of occurrence and persistence of the symptoms of ischemia for modern correction of the therapeutic collection. However, till now the main markers of the risk of the forming of the syndrome of cerebral ischemia in new-born children are not studied enough.

We valued such risk comparing the frequency of occurrence of CI with the index of ratio of the chances and its 95% confidence interval in two groups. The children having CI and presence of the definite clinical anamnestic factor were in the first (main) group. The children, having clinical signs of CI in the new borning period but not having some probable factors of the risk according to the interviews of the mothers and individual cards of the pregnant woman and a woman in labor (giving a birth woman) were in the second group of the control. In the gradations of the "evidence-based medicine" such approach belongs to the retrospective research of the factors of a risk of the type "case-control". At the same time the design of the research, made by us, means some limitations. Particularly, the probability of the presence of the systematic mistake is not excluded because of the influence of the outcome on remember about the causative factor with the using of the personal data of the clinical-anamnestic anamnesis. Cohort prospective research could avoid such mistake and it, however, must continue for many years (from 5 till 10 years). The approach used by us allowed to get the answer the question interesting clinicians in the short period with minimum costs.

The materials and the methods of the research.

150 women and their new-born children were included in the research. The group of the pregnant women included in the research was homogeneous according to nationality. (100%-tuvinkas living in Kizil city, Tuva republic).

The next clinical-anamnestic factors were valued by us:

1. The social factors (age, education, mother's and father's social position, conditions of living, quantity of children and adults living together).
2. The data of the gynecological anamnesis (age and characteristics of menarche, gynecological and somatic disease)

3. The process of pregnancy, presence of toxicosis, danger of abortion, anemia of pregnant women, edematous syndrome, signs of prenatal infection, syndrome of chronic placental insufficiency, syndrome of chronic prenatal hypoxia, urogenital infection (infection of the genital tracts).

The statistical methods of the analysis.

The analysis of the statistic meaning of the distinctions of the qualitative signs was made with help of the criterion $X(2)$ with correction Yeitsa. The index of ratio of the chances with 95% confidence interval was used for risk calculation.

The results and the discussion

The examined pregnant women were at the age of 16 till 41. The middle age of the pregnant women was 25 years old. Majority of the women were at the age of 21-29 (54,7%), then the age group according to frequency was 16-20 years old (22,6%) and at the 3 place – 30-35 years old (18,7%), 4% - women older 35 years old.

The examined group was homogeneous according to the singularities of labor (giving a birth) due to the fact that all labors were well-timed at the periods 37-41 weeks of pregnancy and all labors were natural, it means – through- the natural birth canals and in the head presentation. The maternity aid wasn't in the labors in 83 cases, it was 58,9%; 58 (41,1%) parturient women got the maternity aid, 37,9% of them had an augmentation of labor, 62,1% - episiotomy. 46,7% were boys and 53,3% were girls among 150 new-born children (examined by us). All children were full-term new-born children. 28% of children were born with the loop of cord, 72%- without the loop of cord. The mark of the condition of new-born children according to the Apgar scale was 8-10 scores (numbers) in 76% children in the end of one minute of life, 6-7 scores (numbers) in 20,7% children, till 6 scores (numbers)- 3,3 % children.

The weight of the body of the new-born child was minimum 2377 gr, maximum- 4150 gr, on the average- 3344 (+-) 386 gr. he average length of the new-born child's body was 50,3 (+-) 1,7 cm, the circle of the head- 35(+-) 1,2 cm. 57 (38%) new-born children were healthy in the perinatal period. The spectrum of pathology of the perinatal period in other new-born children is in the table 1.

In 20% the children with perinatal pathology had the treatment according to the official recommendations for every pathology, other- 80% new-born children needn't any treatment. 60% new-born children were discharged on the 5-th day after their birth, 40%- after 5 day. The analysis made by us showed that none factors accountable by us and analyzed parameters of early and late gynecological anamnesis didn't influence materially on the forming of cerebral ischemia in new-born children. The quantitative data of the made analysis is in the table 2. As

it's clear from the presented facts (data), the signs of chronic prenatal hypoxia, detected during the pregnancy, increase a risk of the acute ischemia of brain in new-born period in 4, 85 times. The risk of ischemic injury of CNS of a new-born child increases in 2,92 times if his mother has urogenital infection and in 2 times if the pregnant woman has anemia and threat of abortion. All these factors are fully or partly operated and depend on the degree of organization of the obstetric-gynecological aid and tight cooperation between a pregnant woman and an obstetrician and gynecologist controlling her. Generally anemia of pregnant women demands minimum financial costs for diagnostics and correction.

Conclusion

So, the influence of the factors of the exogenous nature on the process of pregnancy and perinatal period very connected with the local organization of the obstetric-gynecological aid and tight cooperation between a pregnant woman and all specialists controlling her. The most main factors influencing on the development of a syndrome of cerebral ischemia are anemia of pregnant women, urogenital infection and a syndrome of chronic antenatal hypoxia.

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