PATHOPHYSIOLOGICAL FEATURES OF THE POSTNATAL PERIOD IN NEWBORNS EXPOSED TO HEROIN IN UTERO

© *Kozhadey E.V., Duskaliev D.A.*

Scientific supervisors: Doctor of Medical Sciences, Professor Vasiliev A.G.,Tyumina L.M, Senior lecturer
Department of Pathological Physiology with a Course of Immunopathology
Department of Foreign Languages
St. Petersburg State Pediatric Medical University

Contact information: Kozhadey E.V., psychiatrist, 1st year postgraduate student -ekaterinakozhadey@gmail.com, Duskaliev D.A., 5 st year student

Keywords. Pregnant women heroin addiction, perinatal drug addiction, neonatal abstinence syndrome, Finnegan scale, treatment of neonatal abstinence syndrome.

Introduction. Neonatal withdrawal syndrome (NAS) is a complex of symptoms associated with the cessation of the intake of opiates transplacentally transmitted from mother after childbirth[1]. A study of pregnant women in the United States aged 15 to 44 found that 5.9% of them had used drugs in the past month (Substance Abuse and Mental Health Administration , 2012). In 2001, a national study reported illicit drug use by 3.7% of pregnant women in the US. In 2009 their number increased to 4.5%. (Annemarie Unger, Verena Metz, and Gabriele Fischer, Austria 2011). In Russia, the number of children born to drug-addicted mothers is 11.0% on average [2].

The aim of the study. To identify the features of the postnatal period in newborns exposed to heroin in utero.

Materials and methods. Clinical and anamnestic. Finnegan scale (1992, 2007) is used to assess the severity of the main symptoms of NAS (Neonatal withdrawal syndrome). We studied 30 infants with clinical manifestations of heroin NAS (study group). The control group included 30 neonates with severe perinatal pathology.

Results. The results showed that the drug-addicted women often give birth quickly, and they rarely underwent a caesarean section. The average gestational age of newborns within the test population was higher than in the control group. However, between the two groups there were no difference in body weight, body length, head circumference and chest circumference at birth. In full-term patients of the main group compared to preterm NAS expressed a longer and had a higher total score of symptoms of irritation of the central nervous system on the L. Finnegan scale. Neonate carriers of hepatitis B virus (HBV), compared with infants without HBV also expressed a large average duration and NAS total L. Finnegan score. No significant differences between characteristics such as maternal age, duration of heroin use of the mother, the total score on the scale L. Finnegan, the day NAS relief between patients whose mothers had used heroin on the day of birth and before were observed in the data. Among more than half of NAS patients the following symptoms were observed: excessive high-pitched cry, increased muscle tone, sleep less than 1 hour after feeding, mild tremors when undisturbed, nasal stuffiness, excessive sucking.

Conclusions. Children with NAS lag behind in physical development (brain growth slowdown), drug addicted women are more likely to have rapid labor. Newborns with NAS require special care and attention from medical personnel. Given the above, there is a need to unify approaches to nursing newborns with neonatal withdrawal syndrome. It is promising to assess the impact of different types of drugs on the body and subsequently on the behavior of the child.

We plan to continue this work and increase the number of patients in the main and control groups for a more detailed study of this issue and the search for new data.

References:

1. Finnegan L. P., Kaltenbach K. Neonatal abstinence syndrome. Primary pediatric care. 2nd ed. St. Louis, Mosby Yearbook, Inc., 1992, pp. 1367–1378.
2. Patrick S. W., Schumacher R. E., Benneyworth B. D., Krans E. E., McAllister J. M., Davis M. M. Neonatal abstinence syndrome and associated health care expenditures: United States, 2000–2009. JAMA, 2012, vol. 307, no. 18, pp. 1934–1940.