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PREVENTION OF RDS IN PREMATURE BIRTH

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Abstract. Premature birth is still continues to be the main cause of perinatal and infant morbidity and mortality. In developed countries preterm birth occur with a frequency of 7,0% - 12,0%, with one third of them occur before 34 weeks of gestation [1]. The incidence of premature birth in the Republic of Belarus is maintained in the range of 4,0%-4,1% with no tendency to decline, which leads to high morbidity in premature infants [2]. With the introduction of prenatal prevention of respiratory distress syndrome and surfactant substitutive therapy, the frequency of asphyxia and the structure of pathology of the early neonatal period have changed [3].

Purpose: to assess the incidence of asphyxia and the structure of pathology of the early neonatal period in preterm neonates, carry out their comparative analysis, depending on the course of dexamethasone prophylaxis in the antenatal period.

Materials and methods of research. Carried out a retrospective analysis of 91 stories of childbirth and 103 of newborns, delivered on 27 to 34 weeks of gestation, at the maternity and observation wards of "Gomel city clinical hospital №3" in 2015-2016. All patients off 1 group received full antenatal dexamethasone prophylaxis course, 24 mg of dexamethasone (23 patients) and partial course, 12 mg of dexamethasone (group 2, 8 patients).

Results of research and the discussion. The average age of the patients in the group was 29 (16, 40). Among them primigravida – 31 (34,0%). Obstetric history aggravated – 88 patients (96,7%,91,99). Somatic pathology was found in 85 (93,4%,86,98) patients. The average gestational age at the time of birth was 226,5±9,7 days. Resulted in vaginal delivery – 18 (19,8%) patients, in caesarean section – 73 (80,2%) patients. The maximum dry period was 72 hours, minimum – 5 minutes. The antenatal prevention of respiratory distress syndrome with dexamethasone was performed in 31 cases (34,1%,24,45). Part-time prophylaxis course at a dose of 8 mg of dexamethasone was conducted in 3 patients (9,7%,2,26), 12 mg – in 5 pregnant women (16,1%,5,34), a full course of prophylaxis (24 mg) – in 23 pregnant women (74,2%,55,81). For surfactant replacement therapy 49 (47,6%,27,57) newborns were given: alveofact 108 mg – 7 (14,3%,6,27), curosurf 120 mg – 34 (69,4%,54,82), survanta 100 mg – 8 (16,3%,7,29). All newborns were transferred to the Department of anesthesiology, resuscitation and intensive care. We compared the frequency of asphyxia at birth and the structure of pathology of the early neonatal period in children of the patients who received complete (group 1, 23 patients of 27 children) and incomplete (group 2, 8 patients, 9 children) dexamethasone prophylaxis course. Patients were matched by gestational age (228, 199 days) and mode of delivery: caesarean section was performed in 90,9% of the patients in the 1st group and 75,0% of the patients in the 2nd group. In the 1st minute a score of 8 by Apgar scale in group 1 received 10 newborns (37,0%,19,57), in group 2 there were no infants without asphyxia, $Xi^2 = 4,9$, p= 0,02, score 5-6 – 17 newborns (63,0%,42,80), in group 2 – 8 (88,9%,51,99), score 3 – 1 (11,1%,1,48) only in 2 group. In the 5th minute score 8 was observed only in group 1 in 14 (51,8%,32,71) of the infants, $Xi^2 = 4,9$, p = 0,02, in group 1 the score of 7 was in 2 newborn (7,4%,1,24), in group 2 – 1 (11,1%,1,48); mechanical ventilation in group 1 was performed in 10 (37,0%,19,57) cases in group 2 – in 8 (88,9%,52,99) newborns.

Conclusion. 1. In the structure of pathology in the early neonatal period in preterm infants dominated toxic-hypoxic encephalopathy and the syndrome of CNS inhibition in 97 (94,0%), anemia – 42 (40,7%), small anomalies of heart development (additional chord in the left ventricle, patent foramen ovale) - 38 (36,9%) congenital pneumonia – 51 (49,5%), intestine lesions – 31 (30,1%), neonatal jaundice – 32 (31,1%); 2. Newborns who underwent incomplete course of dexamethasone prophylaxis more often showed asphyxia in the 1^{st} and 5^{th} minutes ($Xi^2 = 4,9$, p = 0,02) and pneumonia in the early neonatal period ($Xi^2 = 3,9$, p= 0,04).