TO PARTICULARITY OF THE PHYSICAL DEVELOPMENT NEWBORN BORING FROM WOMEN WITH UNTILEKLAMPSHIA

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Article history:		Abstract:
		In work is described particularities of the factors anthropometria 100 newborn, been born from woman's with untileklampshia (UE) depending on their postnatal gestation age, in compared aspect before 30 children, been born from woman's without sign PE and extragenital of the diseases. It is done conclusion that amongst children, boring from women with untileklampshia, are concentrated unripe children (maturely and born prematurely), objective estimation which in early neonatal period imitated the clinic an hypocsyc-iscyemyc encephalopathia and its complications.

At present, the issues of control over the physical development of children are of particular relevance, and anthropometric indicators are one of the main indicators of public health [5, 6, 12].

Scientific works on children's anthropometry are numerous, and their number continues to grow [1, 2, 9, 11]. However, the parameters of physical development of children, taking into account their physiological state at different age periods, remain out of sight of researchers. The study of the anthropometry indicators of newborns, taking into account their physiological maturity in various pathologies of the mother during pregnancy, would allow pediatricians to determine the range of diseases characteristic of them and predict their conditions in the near neonatal period of life.

THE AIM OF THE STUDY is to determine the structure of newborns born to women with preeclampsia (PE), taking into account the correspondence of their body weight to postnatal gestational age (PDV).

MATERIALS AND METHODS OF RESEARCH. A total of 97 parturient women with various manifestations of PE (study group) with a gestational age of 33-42 weeks were examined. PE was set according to the Gooke scale in the modification of G.M. Savelyeva et al. [8] and by severity (I, II, III) were distributed respectively: 38.1%, 54.6% and 7.3% (p>0.05, p<0.01).

The control group of parturient women consisted of 30 women with a gestational age of 35-41 weeks, without signs of PE and extragenital diseases before and during pregnancy. In terms of age (24.2±0.68 and 25.2±0.48 years, p>0.05 years, p0.05), parity of pregnancies - primary pregnancies (35.1±4.85% and 26.7±8.12%, p>0.05) and repeated pregnancies (64.9±4.85 and 72.3±8.12, p>0.05) were statistically comparable.

The condition of newborns in the control group according to the Apgar scale for 5' was estimated as 4-8 points in 80%, 7-6 points in 16.7% and 5-4 points in 3.5% of children with an average score of 7.73±0.19 points. In the main group of newborns with an Apgar score of 9-8 points, 42% of children were born (p<0.001), 7-6 points – 24% (p>0.05). 5-4 points – 28% (p<0.001) and ≤3 points 6% of children (p<0.001), with an average score of 6.54±0.12 points (p<0.001) for 5' life.

The NHR of newborns was established according to 11 somatic and 10 neurological parameters of the J.L. Ballard scale [10], modified by M.E. Abdullaeva et al. [1]. In the control group of newborns, PGV ≥41 weeks. It was detected in 6, 38-40 weeks - in 23 and in 1 child with 35 weeks. In the main group, children with PRV were identified ≥41 weeks in 8, 38-40 weeks in 60, 37-35 weeks in 17, 34-32 weeks in 14 and 1 child ≤31 weeks.

In newborns of both groups, a standard study of anthropometry parameters was carried out [1, 6]: weight (MT), length (DT), body surface, head circumference (OHol.) and chest circumference (OHr), weight-height index (MCI) and OHol/OGr ratios were calculated. (A.F. Tur's index). The material was processed by parametric (Student's t-criteria) and nonparametric methods – Fisher's exact method (TMP) with angular transformation (φ) for relative quantities (Gubler E.V., 1999) on Microsoft Offis XP (Exell 2003) in the personal computer "Samsung Sons 830".

RESULTS OF THE STUDY AND THEIR DISCUSSION.
We found that the main anthropometric parameters of newborns born to women with PE are significantly lower than the data of children in the control group, respectively – BM (2957.7±48.3, versus 3470.3±92.8 g, p<0.001), DT (49.9±0.42, vs. 52.8±0.37 cm, p<0.001), O.Gol (32.8±0.16 vs. 35.1±0.23 cm), O.gr

(32.4±0.18 vs. 33.9±0.28 cm, p<0.001), MCI (61.3±0.80 vs. 65.4±1.29 conventional units, p<0.001), and the A.F. Tur index was increased (1.045± 0.001 vs. 1.035±0.002, p<0.001).

It is known that at any stage of pregnancy, the development of the fetus and newborns can correspond to the gestational age, outpace or lag behind [1, 3]. In our opinion, when establishing the correspondence of the indicators of physical development of newborns to their PGV, an important guideline for the neonatologist is the A.F. Tur index (OGol/OGER), corresponding to 1.03 at the term of full-term pregnancy (38-40 weeks), prematurity with a period of 37-35 weeks - 1.05, 34-32 weeks - 1.06 and ≤31 weeks - 1.07 conditions. We have found that when the physical development of newborns lags behind the PRT at any of its stages, this index increases, and the MCI decreases, and vice versa, when the child is ahead of the development of his PGV, this index decreases, and the MCI increases. On the basis of these methodological methods, we have established the structure of newborns depending on the duration of PRT and development (appropriate, ahead or lagging behind), which is presented in the table.

Table.
Structure of newborns by body weight to postnatal gestational age (%)

	Structure of newborns	Control group n=30		Main group n=100		up	pφ
		Abs	%	Abs	%		
	Overterm ≥41 weeks:						
1	With a high MT for a given PRT	3	10	4	4,0	1,16	>0,05
2	Appropriate MTs for a given PRT	1	3,3	1	1,0	0,79	>0,05
3	With a low MT for a given PRT	2	6,7	3	3,0	0,85	>0,005
	Altogether	6	20,0	8	8,0	1,7	<0,045
	Full-term with a PRT period of 38-40 weeks:						
1	With a high MT for a given PRT	5	16,7	24	24,0	0,88	>0,05
2	Appropriate MTs for a given PRT	17	56,7	16	16,0	4,24	<0,001
3	With a low MT for a given PRT	1	3,3	20	20,0	2,69	<0,003
	Altogether	23	76,7	60	60,0	1,74	<0,041
	Premature infants with a term of PRT ≤37 weeks:						
1	With a high MT for a given PRT	-	-	6	6,0	2,38	<0,008
2	Appropriate MTs for a given PRT	1	3,3	19	19,0	2,58	<0,005
3	With a low MT for a given PRT	-	-	7	7,0	2,57	<0,005
	Altogether	1	3,3	32	32,0	4,03	<0,001

Note: statistical significance (p<0.05-0.001) is determined for TMF with angular transformation (φ), one-sided criterion.

As can be seen from the data in the table, the proportion of post-term infants with a term of ≥41 weeks was increased among infants born to women without signs of PE (20.0% vs. 8.0%, p<0.045). However, when taking into account the correspondence of their body weight to PRTs, respectively, which are higher, corresponding and low, no statistical differences were found in the compared groups (p>0.05).

Women with PE had significantly fewer babies with a 38-40 week term (60.0% vs. 76.6%, p<0.041). Among them, the proportion of full-term infants with a body weight corresponding to the PRTs is lower (16.0% vs. 56.7%, p<0.001) and the proportion of infants with low birth weight that does not meet the PRTs of full-term maturity is increased (20.0% vs. 3.3%, p<0.003) in the absence of statistical differences in the number of infants with a

body weight exceeding the PRT (24.0% vs. 16.0%, p>0.05). However, it should be noted that the birth of children at term with a lag or advance of the MT for PGV, under special conditions of their intrauterine development (mother's PE) cannot be explained by alimentary deficiency in the first case or improved fetal nutrition in the second case. Both groups of full-term babies born to women with PE were exposed to chronic intrauterine hypoxic stress for a longer period of time [3, 5]. The difference was that in the second group of full-term infants, the effect of the hypoxic agent was less (mild maternal PE) and not long-term (after 34 weeks of gestation), and in the first groups of full-term infants, the exposure to hypoxic stress was longer (up to 34 weeks of gestation), and strong in severity (PE II and III degrees). In this regard, this group of full-term patients, i.e. those with a low BW, who do not meet the PRTs, should be treated as full-term, but physiologically immature [3].

Among newborns born to women in PE, the proportion of children with a PRT is incredibly high ≤37 weeks (32.0% vs. 3.3%, p<0.001), and a significant proportion of them are premature infants with MT corresponding to their PRTs (19.0% vs. 3.5%, p<0.001). Among preterm infants, there were also infants with both excess (6.0%, p<0.008) and lag (7.0%, p<0.005), inconsistent with PRV, which was not found among infants from females without signs of PE. Based on the principles of ontogenetic physiology [5, 9], we classified premature infants with BW corresponding to PGV as true prematurity, and premature infants with low birth weight to the group of physiologically immature prematurity infants.

As I.A. Arshavsky rightly notes [2], physiologically immature babies can be full-term or born prematurely, but the degree of physiological immaturity in such premature infants is less than in immature full-term infants, since the latter have undergone acidotic (hypoxic) alteration for a longer time.

It seems to us that the study of the structure of newborns born to women with PE in terms of the ratio of body weight and PGV will facilitate the work of a neonatologist in the differential diagnosis of CNS depression syndrome in hypoxic-ischemic encephalopathy (HIE), with the clinical picture of a physiologically immature full-term baby - poorly expressed physiological hypertonia of the limbs, hyporeflexia from the groups of unconditioned reflexes - oral, posotonic (suprasegmental) and spinal (motor) Automatism. A certain difficulty may arise in the work of a neonatologist and in the diagnosis of hyperexcitability syndrome of convulsions in immature premature infants, which are considered to be a consequence of a post-hypoxic state, without taking into account the possibility of metabolic disorders (hypoglycemia, hypocalcemia) characteristic of premature babies by BW by term of pregnancy (BW), which themselves can provoke increased excitability and convulsive syndrome [3, 5]. Taking into account these data in newborns born to mothers with PE will allow pediatricians to correctly comprehend symptom complexes such as HIE, hypertension syndrome, so often established in the practice of domestic neonatology – 16 and 88 per 1000 children, respectively in full-term and premature infants [4, 7], in contrast to the data of foreign researchers 1.6-8.0 per 1000 newborns [11].

FINDINGS

1. At the time of birth, newborns have phenotypic differences that differ in body weight and postnatal gestational age, which is important for their postnatal development.

2. Among newborns born to women with preeclampsia, both true premature and immature full-term infants are concentrated.

3. Taking into account the physiological maturity of newborns born to women with preeclampsia allows doctors to identify a group of children (immature, full-term and premature) with false clinical and neurological signs of hypoxic-ischemic encephalopathy with its numerous consequences.

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