of comparison ($p < 0.05$).
CONCLUSION: Early (2-4 days of life) and significant ($p<0.01$) increase in serum cystatin C, interleukin-18 and lipocalin associated with neutrophil gelatinase in the urine indicate endogenous renal dysfunction, damage to the proximal renal tubules in premature infants who were exposed to perinatal hypoxia. Significant decrease in the maximum systolic flow rate in the trunk of the renal artery and pulsation index ($p<0.05$) in premature infants who underwent perinatal hypoxia indicate a significant impact of circulatory disorders on the formation of hypoxic nephropathy.

MO1012 **ACUTE KIDNEY INJURY IN PREMATURE INFANTS EXPOSED TO PERINATAL HYPOXIA**

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BACKGROUND AND AIMS: Features of nephrogenesis and functional state of the kidneys of premature infants makes them extremely vulnerable to the damaging effects of hypoxia. The imperfection of traditional methods of diagnosis and non-specific clinical manifestations of ischemic nephropathy in premature infants requires the study of new informative diagnostic tests that would indicate the development of a pathological process in the renal tissue.
The aim is to early diagnose acute kidney injury in preterm infants exposed to perinatal hypoxia, based on the study of renal blood flow and laboratory markers - cystatin C in serum, lipocalin and interleukin-18 in urine.
METHOD: We examined premature infants exposed to perinatal hypoxia and had signs of injury of kidney depending on gestational age: 65 infants with gestational age <32 weeks and 50 infants with gestational age > 32 weeks. The group of comparison included 25 premature newborns who were born without hypoxia and without signs of kidney injury. Blood and urine samples were obtained at 2-4 days of life. Ultrasound examination of the kidneys was performed at 3-5 days of life.
RESULTS: The level of CysC in the serum of infants with gestational age <32 and> 32 weeks significantly exceeded this level in infants of the group of comparison (in infants with gestational age <32 weeks -2.50 [2.14; 3.26] ng/ml, in infants with gestational age> 32 weeks - 1.89 (1.49; 2.45] ng/ml), $p < 0.01$.
The value of NGAL in the urine of infants with gestational age <32 weeks - Me 96.03 [38,6; 131.23] ng/ml UCr and of infants with gestational age > 32 weeks - Me 75.10 [31,24; 126.6] ng/ml UCr against Me 25.9 [8.24; 44.64] ng/mg UCr in infants of the group of comparison ($p < 0.01$).
IL-18 in the urine of infants with gestational age <32 weeks and > 32 weeks was significantly higher than that in infants of the group of comparison (Me 27.98 [25.49; 29.51] pg/mg UCr, Me 22.0 [19.6; 25.63] pg/mg UCr, and 17.41 [13.96; 18.78] pg/mg UCr, respectively, $p < 0.01$).
According to the results of duplex scanning, the maximum systolic flow rate in the trunk of the renal artery (Vmax) in infants with gestational age <32 weeks (35.62 ± 3.2 cm/s) was lower than in infants of the group of comparison ($p < 0.05$). Decreased IR less than 0.6 in 19 ($29.3 \pm 5.6\%$) infants with gestational age <32 weeks and in 12 ($24.0 \pm 6.4\%$) infants with gestational age > 32 weeks indicates vasodilation and, possibly arteriovenous shunting. The pulsation index in infants with gestational age <32 weeks and > 32 weeks (0.88 ± 0.1 and 0.98 ± 0.1) was significantly lower than in the group