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Title: Programming early food sensitization of a child developing in conditions of chronic placental insufficiency

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Body: Objective: To study the incidence of food sensitization in the first year of life in full-term infants, whose intrauterine development occurred in the placental insufficiency. Material and methods: The main group - 20 mothers with preeclampsia. Control – 64 infants from mothers whose pregnancies without complications. The mothers' state of health, clinical state of newborn infants and the rate of food allergy in infants on the first year of life were estimated. Histological study of placenta, immunohistochemical CD83, CD31, immunomorphological definition of C3b, IgA, IgM, IgG, IL-4, IL-6 in placenta was carried out. Results: The rate of food allergy in the main group made up 75%, in the control one – 34.4% ($p<0.001$).Only in the main group the expression of CD83 and CD31was revealed in perivascular space of decidual membrane and in stroma of placental chorionic villi. The relative area of CD83 expression is 4,94%, CD31 – 1,28%, and the optical density - 0.35±0.08 and 0.29±0.02 c.u., correspondingly. High correlation ($R=0.95$, $p<0.001$) has been revealed betrween the CD83 and tissue deposit of the C3b-component, IgA, IgM, IgG, IL-6 ($R=0.8$, $p<0.001$), IL-4 ($R=0,63$, $p<0.001$). Conclusion: In conditions of chronic placental insufficiency immune system of the fetus undergoes antigenic aggression. Presentation of an antigen to the fetus by means of migration of CD83 molecules through vascular endothelium of the villous chorion promotes predominant differentiation of naive T-lymphocytes into the cells with Th2 phenotype, namely, "programming" of allergic phenotype of the infant.