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**MORPHOLOGICAL FEATURES OF THE FATTY CAPSULE OF THE KIDNEYS OF NEWBORNS DEVELOPING UNDER MATERNAL PREECLAMPSIA AND IRON DEFICIENCY ANEMIA CONDITIONS**

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**Key words:** morphology, kidneys fatty capsule, newborn, mother, preeclampsia, iron deficiency anemia.

**Introduction.** Kidneys fatty capsule (FC) is the energy storage, endocrine organs due to adipokines, cytokines secretion [1]. In adults, a pronounced FC is associated with the development of cardiovascular, chronic kidney diseases [1, 2]. Numerous adults’ diseases have their origins in antenatal, intranatal periods. The aim is to identify the morphology of the kidneys FC of newborns from mothers with complicated pregnancy (СP) by preeclampsia (PE), iron deficiency anemia (IDA) of varying degrees of severity.

**Materials and methods.** The material was the newborns kidneys. Three groups (G) were made: G 1 – the kidneys of newborns from mothers with physiological pregnancy (n=15); G 2 – the kidneys of newborns (n=44) from mothers with CP by IDA; G 3 – the kidneys of newborns (n=40) from mothers with CP by PE. Histological methods were used.

**Results.** The FC had no macroscopic differences in newborns of G 1, 2, and in newborns of G 3 from mothers with СP by mild severity PE. In newborns of G 3 from mothers with CP by moderate severity, severe PE, the FC was more pronounced compared with G 1, 2. Microscopically the FC of the kidneys of the newborns of G 1, 2, newborns of G 3 from mothers with CP by mild severity PE was characterized by adipocytes of round-oval shape, normal size. In newborns of G 3 from mothers with CP by moderate severity, severe PE, adipocytes had a round-oval shape, normal size or they were enlarged in size, irregular or polygonal shape, formed fatty cysts.

**Conclusions.** Maternal IDA of varying degrees of severity, mild PE does not affect the FC of the newborns kidneys. Moderate severity, severe PE leads to an increase of the kidneys FC of newborns. This fact may be one of the mechanisms that would lead to kidneys damage of such newborns.

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