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EXPRESSION OF PROTEIN MARKERS OF ADIPOGENESIS IN ENDOMETRIOTIC LESIONS

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Endometriosis is a widespread disease in which foci of tissue growth, morphologically and physiologically similar endometrium, are observed outside the uterine cavity. Earlier, we identified a number of genes that are overexpressed in ectopic endometrium compared to eutopic one. Among the genes overexpressed in the endometriotic lesions, four were particularly distinguished: *C7*, *FABP4*, *ADH1B*, and *PLA2G2A*. For all of them, differences in the expression

level were multiples of 200–300. In this study, we verified the results obtained using RT-RV-PCR and IHC, and also conducted a study of the expression of these genes in the peritoneum of patients with endometriosis and healthy women. We have shown that a high level of expression of the studied genes is characteristic of endometriotic lesions and peritoneal cells, but not of eutopic endometrium. The FABP4, PLA2G2A and ADH1B proteins are known as adipogenesis markers, the C7 protein is also involved in the differentiation of adipose tissue stem cells. The equally high level of expression of the studied genes in the foci of endometriosis and the underlying peritoneum may indicate a common origin of these tissues, testifying in favor of the metaplastic theory of the origin of foci of endometriosis. Also, our data can be interpreted as an indication of the possible role of adipogenic stem cells in the pathogenesis of endometriosis.

Keywords: endometriosis, differential gene expression, stem cells