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Evaluation of immunohistochemically expression of GLUT-1 in benign proliferative, hyperplastic endometrium and endometriosis adenocarcinoma

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ABSTRACT

Objectives: The aim of this study is to evaluate the GLUT-1 expression in benign proliferative, hyperplastic, and malignant endometrial tissues, to evaluate the usefulness of GLUT-1 expression in endometrial hyperplasia, and to determine its role in the neoplastic progression to endometrioid type adenocarcinoma. We also aimed to analyze some prognostic clinical parameters (age, stage, grade).

Methods: This cross sectional study was carried out on paraffin embedded surgical specimens of endometrial tissue. Applying the immune histochemical techniques by using the GLUT-1 as a primary antibody, statistical analysis was done and the correlation with different clinical and pathological parameters were assessed.

Results: 98 cases of endometrial tissue, 17.4% disordered proliferative endometrium, 22.4% endometrial hyperplasia without atypia, 18.4% endometrial hyperplasia with atypia, 41.8% endometrioid adenocarcinoma, 56.1% were GLUT-1 positive. Significant correlation was found between GLUT-1 expression and increasing degree of atypia as it was negative in benign proliferative and hyperplasia without atypia meanwhile positive in hyperplasia with atypia and endometrioid carcinoma. Significant correlation with grade of carcinoma, patient age, no correlation was found with ovarian and cervical metastasis, no significant correlation was found with tumor stage.

Conclusions: GLUT-1 immunostaining may be useful in distinguishing hyperplasia without atypia from hyperplasia with atypia; GLUT-1 overexpression is a consistent feature of endometrioid adenocarcinoma.

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