



Immunohistochemical expression of galectin-3 is significantly associated with grade, stage and differentiation of endometrial carcinomas

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Abstract

This study describes galectin-3 immunohistochemical phenotype and its association with clinicopathological factors in the carcinoma of endometrium. Seventy one cases of endometrial carcinoma and 30 cases of benign and normal endometrium were employed for the detection of galectin-3 protein using tissue microarrays and immunohistochemistry staining. Thirty nine (55%) cases, including 54.2% of endometrioid adenocarcinomas and 55.5% serous carcinomas, were positively stained for galectin-3. Brown granular expression of this glycoprotein was detected in transformed epithelial cells of 36 cases including 28 cases with membranous and cytoplasmic staining and 8 cases with only cytoplasmic staining; nuclear expression was present in stromal cells of the remaining 3 cases. Twenty-four (80%) control cases showed granular cytoplasmic and membranous expression, and six control cases were negative. Tumor grade, stage and differentiation were significantly associated with galectin-3 immunoreactivity (p -values are 0.043, 0.016, and 0.044 respectively), cases with membranous and cytoplasmic staining is significantly associated with grade I and stage II, while cases with loss of staining are more frequent in grade II, III and poorly differentiated tumors. No significant association of galectin-3 staining was observed with age, diagnosis, recurrence and alive status. The current study supports the tumor suppression role of galectin-3 in endometrial carcinoma. Greater galectin-3 immunostaining has been found in control endometrial tissues compared to endometrial tumors. Loss or decreased galectin-3 immunoexpression gives a sign for poor prognoses in endometrial carcinoma patients.

Keyword

Galectin-3; Endometrial carcinoma; Immunohistochemistry

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