Comparison of stromal CD10 expression in benign, borderline, and malignant phyllodes tumors among Egyptian female patients

Wael S Ibrahim
Department of Pathology, Faculty of Medicine, Cairo University, Cairo, Egypt

Abstract

Background: Phyllodes tumors are group of biphasic fibroepithelial tumors of the breast of varying malignant potential, ranging from benign tumors to fully malignant sarcomas. According to the Egyptian National Cancer Institute, female malignant cases showed appreciable increase in the recent time period for breast cancer with the malignant phyllodes tumors representing 0.41% of cases in the year 2003-2004. Aims: This is an immunohistochemical study to compare CD10 expression in benign, borderline, and malignant phyllodes tumors, in order to highlight its diagnostic and prognostic values. Materials and Methods: This study conducted 34 Egyptian female cases of phyllodes tumors of different grades to be studied histologically and immunohistochemically using antibodies against CD10. Statistical Analysis: The Chi-square test was used to determine differences in CD10 expression between benign, borderline, and malignant tumors. One-way ANOVA test was used to determine whether the difference was significant. Significance was established at P<0.05. Results: In the 24 cases of benign phyllodes tumors, only four cases (16.7%) showed positive CD10 reactivity. Three cases (60%) out of five borderline phyllodes tumors showed positive CD10 reactivity, while four (80%) out of five cases of malignant phyllodes tumors showed positive CD10 staining. Conclusion: From these highly significant results, we believe that there is a strong correlation between CD10 expression and tumor grade, which could be an important observation that may have both diagnostic and prognostic implications as well as promising potential target for development of novel therapies.

Keywords: CD10, immunohistochemistry, phyllodes, stromal breast tumors

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