عنوان مقاله:

The Prognostic Significance of ALDH-۱ and SOX۹ Expression in Early Breast Cancer

محل انتشار:

مجله سرطان خاورمیانه, دوره 13, شماره 4 (سال: 1401)

تعداد صفحات اصل مقاله: 12

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خلاصه مقاله:

Background: Aldehyde dehydrogenase ۱ (ALDH۱) is an enzyme accountable for the detoxification of aldehydes. Sex-determining region Y-box ۹ (SOX-۹) plays a role in many biological and pathological processes. In this study, we aimed to evaluate the prognostic significance of ALDH۱ and SOX۹ expression in early breast cancer.Method: The expression of ALDH۱ and SOX-۹ was evaluated through immunohistochemistry derived from ۵۰ eligible patients with early breast cancer included in the current prospective cohort study.Results: Positive expression of ALDH۱ and SOX-۹ were detected in ۲۹ (۵۸%) and ۳۴ (۶۸%) patients, respectively. The positive expressions of both markers were statistically significant associated with increasing the stage, lymph nodes metastasis, high Ki۶۷ labeling index, and molecular subtypes (P < ۰.۰۰۱), along with with the biological markers; estrogen receptors, progesterone receptors, and human epidermal growth factor receptor ۲ over-expressions, and large tumor size (P = ۰.۰۳۹, P = ۰.۰۲۲, P = ۰.۰۲۴ and P = ۰.۰۰۳ for ALDH۱ expression and P = ۰.۰۱۲, P = ۰.۰۰۷, P = ۰.۰۰۴ , and P = ۰.۰۰۲ for SOX-۹ expression, respectively). There is a significant positive association between the expression of ALDH۱ and SOX-۹, r (correlation coefficient) = +۰.۸۰۶ (P < ۰.۰۰۱). Local recurrence was associated with the positive expression of ALDH۱ only (P = ۰.۰۴۵) and the disease progression was statistically significant and associated with the positive expression of both ALDH۱ and SOX-۹ (P = ۰.۰۳۸, P = ۰.۰۲۳, respectively). There was significant association of positive expression of SOX-۹ with reduced ۳-y disease-free survival (P = ۰.۰۳۹).Conclusion: Positive expression of ALDH-۱ and SOX۹ were associated with aggressive histopathological features and poor outcome in early breast cancer and can be considered potential .prognostic markers in this group of patients

کلمات کلیدی:

Early breast cancer, Neoplastic stem cells, Aldehyde dehydrogenase ۱, SOX۹, Prognosis