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Prognostic and Predictive Value of Tumor: Infiltrating Lymphocytes in Triple Negative Breast Cancer

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Abstract : Background/Purpose: Previous preclinical and clinical data suggest that increased lymphocytic infiltration would be associated with good prognosis and benefit from immunogenic chemotherapy especially in triple-negative breast cancer (TNBC). We investigated a single-center experience of TNBC and relationship with lymphocytic infiltration. Methods: From January 2004 to December 2012, at the Department of Surgery, Kangbuk Samsung Hospital, Sungkyunkwan University, School of Medicine, we retrospectively reviewed 897 breast cancer patients-clinical outcomes, clinicopathological characteristics, breast cancer subtypes. And we reviewed lymphocytic infiltration of TNBC specimens by two pathologists. Statistical analysis of risk factors associated with recurrence was performed. Results: A total of 897 patients, 76 were TNBC (8.47%). Mean age of TNBC patients were 50.95 (SD10.42) years, mean follow-up periods was 40.06 months. We reviewed 49 slides, and there were 8 recurrent breast cancer patients (16.32%), and 4 patients were expired (8.16%). There were 9 lymphocytic predominant breast cancers (LPBC)-carcinomas with either intratumoral lymphocytes in >60% of tumor cell nests. 1 patient of LPBC was recurred and 8 were not. In multivariate logistic regression, the odds ratio of lymphocytic infiltration was 0.59 (p=0.643). Conclusion: In a single-center experience of TNBC, the lymphocytic infiltration in tumor cell nest might be a good trend on the prognosis but there was not statistically significant.

Keywords: tumor-infiltrating lymphocytes, triple negative breast cancer, medical and health sciences

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