CONFERENCE ABSTRACT

Prognostic significance of CXCR4 and mTOR expression in diffuse large B-cell lymphoma patients

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ABSTRACT

Background: The aim of this study was to investigate the prognostic role of mammalian target of Rapamycin (mTOR) and C-X-C chemokine receptor type 4 (CXCR4) in diffuse large-B-cell lymphoma (DLBCL) patients.
Patients and methods: This retrospective study was collected data from 64 de novo DLBCL patients, who received standardized R-CHOP therapy at two oncology centers. CXCR4 and mTOR expressions were assessed by immunohistochemistry.
Results: Out of the 64 DLBCL patients, 40 patients were positive for CXCR4 (62.5%) and 35 patients for mTOR (54.7%) expressions. CXCR4 expression was positively correlated with mTOR expression (r = 0.7; $p < .001$). While mTOR expression was significantly associated with high lactate dehydrogenase level ($p = .03$) and number of extranodal sites one or more ($p = .02$), CXCR4 expression was significantly associated with high IPI score ($p < .001$) and ECOG PS ($p = .005$). Furthermore, the expression levels of mTOR and CXCR4 were significantly associated with older ages and poor response to treatment ($p = .04$, $< .001$ and .04, .03, respectively). After a median Follow up of 22 months, mean $\pm$ SD overall survival (OS) was 65.391 $\pm$ 4.705. Kaplan–Meier analysis showed that patients positive for mTOR and CXCR4 expression had shorter DFS ($p = .01$ & .02) and OS ($p = .02$ & .04). Multivariate analysis showed that CXCR4 and mTOR positivity is an independent prognostic factor for significantly poorer DFS ($p = .03$, and .02 respectively) but not for OS ($p = .09$ and .08 respectively) in the DLBCL pateints.
Conclusion: Our results indicate that the expression of CXCR4 and mTOR may be poor prognostic biomarkers in DLBCL.

Key Words: DLBCL, Mammalian target of rapamycin, CXCR4, Immunohistochemistry, Prognosis

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