Oral Presentation

GLUT1 expression in non-Hodgkin lymphoma, diffuse large B-cell lymphoma: clinical and International Prognostic Index analysis

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High levels of glucose transporter 1 (GLUT1) expression are correlated with aggressiveness and poor outcomes in many malignancies. There were few studies of this correlation in non-Hodgkin lymphoma. Diffuse large B-cell lymphoma (DLBCL) is the most common type of non-Hodgkin lymphoma and have heterogeneity in clinical outcomes.

Objective: The aims of this study to evaluate the expression of GLUT1 in DLBCL and correlate the association between their expression with International Prognostic Index (IPI) risk groups and overall survival.

Materials and Methods: One hundred and eighty one cases of DLBCL were recruited from January 2007 to December 2013. All cases had available paraffin block tissue and IPI risk data. GLUT1 expression was performed by immunohistochemical method and the results were scored, 0: negative, 1+: weakly positive, 2+: mild to moderate positive, 3+: moderate positive and 4+: Strongly positive. 0 to 1+ were considered negative, and 2+ to 4+ were considered positive.

Results: 93 of 181 DLBCL (51%) showed positive GLUT1 expression in varied intensities and percent of positivity. All of IPI risk groups showed increase GLUT1 expression. Majority showed membrane staining and 22 cases showed intracytoplasmic dot-like positivity. GLUT1 expression had no correlation with IPI risk (P=0.6175), serum lactate dehydrogenase (P=0.3578) and overall survival (P=0.5082).

Conclusion: DLBCL were increase GLUT1 expression in all IPI risk groups. GLUT1 expression in DLBCL did not show any correlation to the clinical outcomes and overall survival.