

Basic Health Sciences

Poster

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Co-expression of MYC and BCL2 in diffuse large B-cell lymphoma

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Introduction: Diffuse large B-cell lymphoma (DLBCL) is the most common type of non-Hodgkin lymphoma. The pathogenesis of DLBCL is complex because it involves at least two different pathways, a de novo pathway and a transformation pathway. *MYC* and *BCL2* oncogenes are 2 key regulators implicated in the pathogenesis. DLBCL with concurrent expression of *MYC* and *BCL2* has been shown to be clinically aggressive and confers a worse prognosis. *MYC* detection by immunohistochemistry is however not performed in a routine diagnostic work up of DLBCL cases. This study examined the presence of *MYC* and *BCL2* proteins by immunohistochemistry in patients diagnosed to have DLBCL. **Methods:** This retrospective study involved patients diagnosed to have DLBCL at Tengku Ampuan Afzan Hospital, Kuantan, Pahang (Year 2009-2011) and Queen Elizabeth Hospital, Kota Kinabalu, Sabah Malaysia (Year 2012-2014). Immunohistochemistry for *MYC* and *BCL2* were performed on sections of formalin fixed paraffin embedded tissue blocks. **Results:** There were 91 cases analyzed. Forty-nine cases (53.8%) exhibited concurrent expression of *MYC* and *BCL2* proteins. In about one third of the cases, positivity was confined to *BCL2*. In 4 cases (4.4%) only *MYC* was expressed while in 9 cases (9.9%) both markers were negative. Overall about 60% and 85% of the cases were positive for *MYC* and *BCL2* respectively. **Conclusions:** Approximately half of DLBCL case studied co-express *MYC* and *BCL2*. Prospective studies to look at the clinical significance and prognostic impact of this finding are advocated.

KEYWORDS: Diffuse large B-cell lymphoma, *BCL2*, *MYC*