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A CASE OF t(14;18)-NEGATIVE FOLLICULAR LYMPHOMA WITH UNUSUAL IMMUNOPHENOTYPE: A DIAGNOSTIC DILEMMA

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Background:

Follicular lymphoma is characterised by the t(14;18)(q32;q21) chromosomal translocation causing an overexpression of BCL2 protein. Interestingly, a proportion of follicular lymphoma do not carry the t(14;18) translocation and consequently lack BCL2 protein expression. We described a case of a t(14;18)-negative follicular lymphoma that lack BCL2 protein expression which had caused diagnostic difficulty.

Case history:

This case was referred to our department for consultation. The patient, a 51-year-old man presented with lymphadenopathy.

Histopathological features:

Examination of his lymph node biopsy showed complete effacement of the architecture by neoplastic follicles containing centrocytes and excess of centroblasts, consistent with high grade (grade 3A) follicular lymphoma. In addition, there were areas of large cell transformation within the same lymph node.

Immunohistochemistry and fluorescent in situ hybridisation (FISH) analysis:

The neoplastic cells expressed pan-B cell markers (CD20, CD79a) and germinal centre marker (BCL6) but were negative for BCL2 and CD10, which are characteristic hallmark found in most follicular lymphoma. The proliferative index was high as indicated by Ki-67 at 50%. Intact expanded follicular dendritic meshworks were present as demonstrated by CD23. FISH analysis using BCL2 break-apart probes showed no evidence of t(14;18) translocation. A diagnosis of high grade follicular lymphoma (3A) with diffuse large B cell transformation was made.

Discussion and conclusion:

The diagnosis of follicular lymphoma that lacked characteristic immunophenotype (BCL2+ and CD10+) and BCL2 gene rearrangement can be challenging. However, accurate diagnosis can be made with careful observation of the lymph node architecture, cell morphology and the presence of intact follicular dendritic meshworks. We also found that the pattern of Ki-67 was helpful.

Keywords:

Follicular lymphoma, t(14;18)-negative, BCL2, CD10