Mantle Cell Lymphoma in Taiwan: A Clinicopathological and Molecular Study of 21 Cases Including One Cyclin D1-negative Tumor Expressing Cyclin D2

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摘要

Abstract

Mantle cell lymphoma (MCL) is a rare B-cell lymphoma that has never been characterized in Taiwan. The purpose of the present paper was to retrospectively identify 21 cases in male patients, with a median age of 61, involving lymph node (91%), marrow (71%), and peripheral blood (23%). Eighteen (86%) were in stages III/IV with 1 and 5 year survival rates of 78% and 17%, respectively. Mixed nodular and diffuse pattern (45%) was most common while interstitial pattern (92%) predominated in marrow. Eighteen (86%) were of classical morphology, two were pleomorphic and one was blastic. The tumors expressed IgM and bcl-2 (100%), cyclin D1 (95%), CD5 (86%), CD43 and IgD (62%), CD52 (60%), and bcl-6 (5%). Ki-67 index>or=30% (P=0.1834) was associated with a trend toward poorer survival while p21, p27, or p53 expression was not statistically significant for survival. Real-time polymerase chain reaction for cyclin D1 (CCND1) gene mRNA expression showed high levels in nine cyclin D1-positive patients and a low level in the single cyclin D1-negative patient. The latter patient was cyclin D2 positive and negative for immunoglubuin heavy chain gene and CCND1 gene translocation by locus-specific interphase fluorescent in situ hybridization. In conclusion, it is confirmed that the usual morphological variants and aberrant immunophenotype of MCL in the West occur in Taiwan and that this disease carries a poor prognosis.