Histopathology and immunohistochemistry in distinguishing Burkitt lymphoma from diffuse large B-cell lymphoma with very high proliferation index and with or without starry-sky pattern: a comparative study with EBER and FISH.

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摘要

Abstract

Burkitt lymphoma (BL) is characterized by c-myc translocation and CD10+/bc-2-/bcl-6+ with a very high Ki-67 proliferation index (PI). Occasional diffuse large B-cell lymphomas may exhibit a very high PI with or without a starry-sky pattern (DLBCL-HPSS). We compared 28 consecutive BL and 16 DLBCL-HPSS cases in immunocompetent Taiwanese diagnosed by histopathologic examination and immunophenotyping and compared the results with results for Epstein-Barr virus-encoded messenger RNA (EBER) and fluorescence in situ hybridization (FISH). There were statistically significant differences in the expression of CD10 (28/28 vs 1/16), bcl-2 (3/28 vs 11/16), MUM1 (5/28 vs 15/16), a PI of 95.0% or more (27/28 vs 2/16), and combined CD10+/bcl-2-/bcl-6+ (24/28 vs 1/16) between BLs and DLBCL-HPSSs. Of the BLs, 7 (25%) of 28 and 26 (96%) of 27 were positive for EBER and c-myc rearrangement as compared with 0 of 16 and 1 (7%) of 15 DLBCL-HPSSs, respectively. We can confidently distinguish BL from DLBCL-HPSS by using histopathologic and immunohistochemical (CD10, bcl-2, bcl-6, Ki-67) methods without the aid of EBER and FISH in the great majority of cases.