



Genetic characteristics of non-Hodgkin lymphoma in ethnic Uighur people, and their clinical significance

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ABSTRACT. The incidence of non-Hodgkin lymphoma (NHL) in China is increasing and is attracting attention as a topic of research. The percentage of NHL cases in ethnic Uighur people is also gradually increasing. We therefore recruited Uighur people with NHL to investigate the correlation between genetic alternations and clinical/pathological features in an attempt to determine their clinical significance. A total of 60 NHL patients were recruited from our hospital for a microscopic examination of their tumor cell morphology. Further analysis of chromosome karyotypes revealed the relationship between genetic alternations and clinical/pathological features. Microscopic examination revealed increased numbers of tumor cells with altered morphology. The recruited patients all exhibited abnormal karyotypes. Chromosomal breakages were detected at 14q32, 18q21, 6q21-25, +3,

+, +18, and short tandem repeat 17 (str17) in 18.3, 25, 25, 18.3, 15, and 21.7% of patients, respectively. Karyotype change was not related to age, gender, performance status score, or pathological type ($P > 0.05$), but was correlated with clinical stage, average lactate dehydrogenase (LDH) level, extra-lymphatic metastasis, median survival time, and efficacy of radio- or chemotherapy ($P < 0.05$). Independent risk factors for genetic change in Uighur NHL patients included clinical stage, average LDH level, extra-lymphatic metastasis, median survival time, and efficacy of radio- or chemotherapy ($P < 0.05$). Uighur NHL patients exhibited genetic changes including t(14:18), 6q21-25, +3, +7, +18, and str17. Clinical stage, average LDH level, extra-lymphatic metastasis, median survival time, and efficacy of radio- or chemotherapy were all independent risk factors for NHL.

Key words: Uighur ethnic group; Non-Hodgkin lymphoma; Chromosome mutation