学位論文の要約

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主論文の題名

Genetic polymorphisms and vincristine-induced peripheral neuropathy in patients treated with rituximab, cyclophosphamide, doxorubicin, vincristine, and prednisone therapy

(遺伝子多型とリツキシマブ、シクロホスファミド、ドキソルビシン、ビンクリスチン、プレドニゾロンによる治療を受けた患者のビンクリスチンによる末梢神経障害)

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Background

Vincristine (VCR)-induced peripheral neuropathy (VIPN) is a common and life-long toxicity in lymphoma patients who received current standard chemotherapy. Several genetic polymorphisms are associated with the incidence of VIPN in children and adults with acute lymphoblastic leukemia (ALL). This study aimed to elucidate a possible relationship between VIPN in adult patients with B-cell lymphoma who received rituximab, cyclophosphamide, doxorubicin, VCR, and prednisone (R-CHOP) and known genetic polymorphisms in patients with pediatric ALL.

Methods

CEP72, ETAA1, MTNR1B, CYP3A5, rs7963521 and rs1045644 genetic polymorphisms were examined in samples from 56 adult patients with B-cell lymphoma treated with R-CHOP. Mutation analysis was performed by direct sequencing.

Results

The median age of patients was 65 years (range, 30-79). The median cumulative dose of VCR was 12 mg/m² (range, 2-16). VIPN was documented in 42 patients (78%): 33 had grade 1, and 9 had grade 2 to 4. Eight (66%) of 12 patients with the *CEP72* TT genotype and 34 (74%) of 46 patients with the *CEP72* CT/CC genotype experienced any grade VIPN (P=0.7). Age, impaired glucose tolerance, the number of cycles of R-CHOP, and the VCR cumulative dose were not associated with the incidence of VIPN. There was no association between VIPN and these six genetic polymorphisms.

Conclusions

These results indicated that *CEP72*, *MTNR1B*, *ETAA1*, *CYP3A5*, rs7963521, and rs1045644 genetic polymorphisms are not associated with VIPN in patients with B-cell lymphoma who received R-CHOP.