

Expression of CD133 in differentiated thyroid cancer of young patients.

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Erratum in

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Abstract

AIMS:

CD133 expression in cancer is frequently associated with poor outcome. Thyroid carcinomas are rare in childhood and adolescence and are associated with a higher risk of recurrence and more metastases than the adult tumours. The aim of the study was to assess whether the expression of CD133 in thyroid carcinomas of children, adolescents and young adults was correlated with clinical prognostic factors.

METHODS:

Tissue microarrays were constructed with 235 tumours coming from 208 young adults with a median age of 28 years and 27 children with a median age of 13 years. An immunohistochemical study was performed with anti-CD133 antibody. CD133 expression was evaluated, using a semiquantitative score based on the percentage of positive cells. The mutation status of tumours was evaluated by reverse transcriptase PCR. Three cell lines were used to confirm CD133 expression by western blot.

RESULTS:

CD133 expression was found in 43% of adult and 37% of child tumours and was confirmed by western blot in cell lines. In young adults, the expression of CD133 was significantly more frequent in patients with tumours >3 cm ($p=0.04$) and in patients with lymph node metastases ($p=0.02$). The expression of CD133 was more frequent in patients in whom the tumour presented a BRAF mutation ($p=0.03$).

CONCLUSIONS:

CD133 expression is correlated with tumour size, lymph nodes metastases and BRAF mutations in young adults. The presence of these cancer stem cells could offer new therapeutic alternatives for aggressive thyroid cancers.

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