c-kit gene mutation is common and widely distributed in intracranial germinomas

2004 Fiscal Year Final Research Report Summary

c-kit gene mutation is common and widely distributed in intracranial germinomas

Research Project

Project/Area Number

15591514

Research Category

Grant-in-Aid for Scientific Research (C)

Allocation Type

Single-year Grants

Section

一般

Research Field

Cerebral neurosurgery

Research Institution

KANAZAWA UNIVERSITY

Principal Investigator

FUJISAWA Hironori Kanazawa University Hospital, Department of Neurosurgery, Instructor, 医学部附属病院, 助手 (40283113)

Project Period (FY)

2003 – 2004

Keywords

molecular analysis / pediatric malignant brain tumor / atypical teratoid / rhabdoid tumor / medulloblastoma / intracranial germ cell tumor / KIT / molecular targeting agent / imatinib mesylate

Research Abstract

OBJECT : With the advent of aggressive multimodality therapy, intracranial germ cell tumors (IGCTs) are becoming favorably controlled ; however, 10% of the germinomas and many of the nongerminomatous subtypes remain refractory to therapy. The goal of this study was to investigate the expression and genetic alteration of the tyrosine kinase receptor, KIT, in IGCTs for which molecular targeting therapy with imatinib mesylate has been commenced or planned in several kinds of neoplasms. METHODS : Twenty-six consecutive IGCTs, including thirteen germinomas, five mixed germ cell tumors (MGCTs), four immature teratomas (ITs) and two each of yolk sac tumors (YSTs) and choriocarcinomas, were examined. Immunohistochemistry for KIT and CD34 was performed on paraffin sections and c-kit mutation analysis was accomplished in exons 2, 8-11, 13 and 17 with or without prescreening by PCR-SSCP. Among the histologic subtypes of IGCTs and other brain tumors, KIT was strongly expressed at the cell membrane ⋯▾ More

Research Products (6 results)

All | 2005 | 2003 | Other

All | Journal Article

[Journal Article] Cyclin D1 is overexpressed in atypical teratoid/rhabdoid tumor with hSNF5/INI1 gene inactivation 2005

[Journal Article] Correlation of γ-catenin expression with good prognosis in medulloblastomas 2005

[Journal Article] Correlation of γ-catenin expression with good prognosis in medulloblastomas 2005

[Journal Article] Molecular analysis of the rhabdoid predisposition syndrome in a child : a novel germline hSNF5/INI1 mutation and absence of c-myc amplification 2003

[Journal Article] Molecular analysis of the rhabdoid predisposition syndrome in a child : a novel germline hSNF5/INI1 mutation and absence of c-myc amplification 2003

[Journal Article] Cyclin D1 is overexpressed in atypical teratoid/rhabdoid tumor with hSNF5/INI1 gene inactivation

URL: https://kaken.nii.ac.jp/report/KAKENHI-PROJECT-15591514/155915142004kenkyu_seika_hokoku_

Published: 2006-07-10