口腔扁平上皮癌の浸潤増殖動態に関する研究: 特に浸潤様式からみた浸潤機序の解析を中心に

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2007 Fiscal Year Final Research Report Summary

Experimental stucles of invasion and metastasis adivky of oral squamous cdl carcinoma

Research Project

Project/Area Number

17390533

Research Category

Grant-in-Aid for Scientific Research (B)

Allocation Type

Single-year Grants

Section

一般

Research Field

Surgical dentistry

Research Institution

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Project Period (FY)

2005 – 2007

Keywords

Oral sauamous cell carcinoma / Proliferation / Invasion / Metastasis / Adhesion molecule / Matrix / Motility factor / Protease

Research Abstract

We have been studying the mode of cancer invasion as the important prognostic factor in patients with oral squamous cell cancer. Grade 4 of mode of invasion proposed by Jakobsson was subclassified into grades 4C (Cord-like type) and 4D (Diffuse type). The purpose of this study is to immunohistochemically and experimentally elucidate this modified grading system for the mode of invasion. Materials and methods used are human cancer materials, DMBA induced tongue cancer and in vitro and in vivo invasion model by using 3 cell lines; OCS-20 (Gr.3), OSC-19 (Gr. 4C) and HOC-313 (Gr. 4D). In immunostained human cancer materials, the higher the grade of the mode of invasion was, the less continuous the basement membrane was, and the less intercellular adhesion was. Majority of diffuse invasive cancers (Gr. 4C and 4D) co-

expressed membrane type-matrix metalloproteinase and matrix metalloproteinase-2. In cell motility assay, HOC-313 showed the greatest motility (autocrine motility factor; AMF). Cell lines cultured on 3T3 fibroblast-embedded collagen gels showed similar invasion pattern to their origin. Among them, only HOC-313 showed invasion even if fibroblast was not embedded. In DMBA induced tongue cancer, the mode of invasion were observed from Gr.1 to Gr.4C. OSC-20 and OSC-19 implanted orthotopically in the tongue of nude mice grew and metastasized to lymph nodes. Their histologic appearance was similar to that of the origin. HOC-313 grew temporarily for several months by support of matrigel. In recent study, cell selected TSU (Gr.4D) produced lethal tumorgenicity in SCID mouse with similar histology to the origin. This grading system was also proven immunohistochemically and experimentally justifiable.

Research Products (8 results)

All | 2008 | 2007

All | Journal Article | Presentation

[Journal Article] Immunohistochemical expressions of E-cadherin and β-catenin crrelate with invasion. 2008

[Journal Article] Immunohistochemical expressions of E-cadherin and B-catenin crrelate with invasion 2008

[Journal Article] Copper efflux transpoter contributes to the acquisition of cisplatin resistance in SCC 2007

[Journal Article] Epigenetic inactivation of IkB kinase in oral carcinomas and tumor progression. 2007

[Journal Article] Copper efflux transpoter contributes to the acquisition of cisplatin resistance in SCC 2007

[Journal Article] Epigenetic inactivation of IkB kinase in oral carcinomas and tumor progression 2007

[Presentation] Behavior of the most invasive oral squamous cell carcinoma(Grade 4D). 2007

[Presentation] Behavior of the most invasive oral squamous cell carcinoma (Grade 4D) 2007

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