A rare case of collision tumor combined with multiple primary squamous carcinomas

Key words: Collision tumor. Combined. Multiple primary squamous carcinomas.

Dear Editor,

The collision tumor and multiple primary squamous carcinomas (MPC) are both rare. To the best of our knowledge, this is the first case report of collision tumor combined with MPC in upper gastrointestinal tract. The reason why the poor patient was attacked collision tumor and MPC may be related to his life style, personal susceptibility and genetic mutation.

Case report

A 56-year-old man was admitted to our hospital complaining of progressive dysphagia and emaciation for 2 months. There were no other special symptoms. He kept smoking about 20 cigarettes per day and drinking ardent spirits about 250 ml of 40% alcohol per day for more than 20 years. Both of computed tomography (CT) scan and gastroscope displayed a mass at the middle part of the esophagus (Figs. 1A and B). Pathological result confirmed the mass was a rare collision tumor which was reciprocally infiltrated with moderately differentiated squamous carcinoma and malignant fibrous histiocytoma with all the items of CD68, S100, myogenin, smooth muscle actin (SMA) and CD34 negative except vimentin (Vim) cytokeratin (CK) positive in immunohistochemistry detection (Fig. 1C).

Ten months later, the patient was admitted for the second time because of progressive pharyngeal paraesthesia and odynophagia. Another mass was found at the right side of epiglottis by CT scan. Pathological result confirmed it was a highly differentiated squamous carcinoma (Fig. 1D).

Discussion

The collision tumor is two independent neoplastic tissues collide reciprocally or infiltrate mutually in the same organ. The distinction between a collision tumor and a multidirectional differentiation of the same neoplasm may be difficult (1), so the final
diagnosis depends on both pathological examination and immuno-
histochemistry detection just as this reported case. There are some
 genetic alterations about collision tumors reported in some liter-
atures (2-4), such as P-53 gene, adenomatous polyposis coil gene
(APC), neurofibromatosis I gene (NF-1), and deleted in colorectal
cancer gene (DCC).

Multiple primary carcinoma (MPC) means two or more pri-
mary neoplasms occur in single or multiple organs simultaneously
or successively. The incidence rate is about 0.3-4.3 % (5). In
1932, Warren and Gates established the criteria of MPC, which
is still accepted today (6): a) both tumors must be malignant; b)
the tumors must be separated by non-neoplastic mucosa; and c)
the possibility that the second tumor represents a metastasis must
be excluded. It is difficult to distinguish MPC and metastatic
tumor in clinic. In this case the evidences for confirmed diagnosis
MPC were as follows: a) About 4 % patients with carcinoma of
oropharynx or larynx could develop a second neoplasm, which
was usually combined with esophageal carcinoma (7); b) Haruma
(8) believed that two malignant tumors in different sites or organs
can be diagnosed MPC as long as they are not conjunction by
pathological examination.

The reason why the poor patient was attacked collision tumor
and MPC may be related to his life style, personal susceptibility
and genetic mutation.

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