Letters to the Editor

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 gastroscopy 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

Fig. 1. A. A soft tissue mass of 2.0 * 3.5 * 5 cm in size without clear borderline or uniform density located at the middle part of esophagus. B. An ulcerated mass of about 6 * 5 cm in size with a lot of sphacelus and food debris on the surface located in the esophagus wall. C. Two kinds of tumor appeared in a view (hematoxylin-eosin staining $\times 40$). D. Normal structure of cells disappeared, confirmed highly differentiated squamous carcinoma (hematoxylin-eosin staining $\times 100$).

diagnosis depends on both pathological examination and immunohistochemistry detection just as this reported case. There are some genetic alterations about collision tumors reported in some literatures (2-4), such as *P-53 gene*, *adenomatous polyposis coil gene (APC)*, *neurofibromatosis 1 gene (NF-1)*, and *deleted in colorectal cancer gene (DCC)*.

Multiple primary carcinoma (MPC) means two or more primary 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.

Jing Bo Yang and Dong Ye Yang

Division of Gastroenterology and Hepatology. The Second Xiangya Hospital of Central South University. Changsha, China

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