中文題目：治療頭頸癌合併頸動脈出血的新方法

英文題目：A novel management of head and neck cancer with carotid blowout syndrome

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Introduction

Nasopharyngeal carcinoma (NPC) is a common neoplasm in Asia and the primary treatment of that remains high dose radiotherapy with concurrent chemotherapy. The potential complications of radiation include xerostomia, otitis media, sinusitis, temporal lobe necrosis, hypopituitarism, cranial nerve palsy, palatal perforation, brainstem damage and radiation arteritis. Carotid blowout syndrome is one of the most life-threatening and uncommon complications of NPC therapy and needs emergent intervention. Despite permanent vessel occlusions under digital subtraction angiography is an usual method for hemostasis, endovascular treatment with covered stent still provides an effective way to control bleeding in carotid blowout syndrome. Here, we report a NPC patient of carotid blowout syndrome secondary to radiotherapy who was successfully treated with covered stent implantation.

Case presentation

This 55-year-old female has the underlying disease of nasopharyngeal carcinoma diagnosed in February, 2016 with initial stage of T1N2M0, stage III. She received treatment with concurrent chemoradiotherapy with total dose of 70 grays and three courses of adjuvant chemotherapy with cisplatin and fluorouracil. However, recurrent nasopharyngeal cancer was diagnosed in September, 2017. She received repeated concurrent chemoradiotherapy (CCRT) with total dose of 60 grays during September to December in 2017. Intermittent epistaxis episodes were found without head and neck trauma after second course of CCRT.

Unfortunately, sudden onset of massive bleeding from nasal cavity and hematemesis occurred. Her vital signs remained stable with blood pressure of 142/100 mmHg and pulse rate of 71 beats per minute. The hemoglobin level dropped suddenly to 9.8 g/dL and the platelet count increased to 582,000/μL. Persistent large amount of blood flowed out from nasal cavity even though applying medical hemostasis with Tranexamic acid and physical nasal packing. She underwent emergent interventions of transarterial embolization with carotid angiography which showed contrast extravasation located at the distal C1 (cervical) and C3 (lacerum) segment of left internal carotid artery without intravascular filling defect and stenosis in the uninvolved vessels. A pseudoaneurysm was noted over left high carotid segment near skull base with active bleeding. A Viabahn stent (6mmx50mm) was implanted over left high carotid segment, and then the bleeding was controlled with resolved pseudoaneurysm.

Conclusion

Carotid blowout syndrome is a lethal complication of NPC and is mainly related to irradiation. Rupture of carotid artery is commonly associated with exposed artery with compromised soft tissue, recurrent tumor, recurrent infection, and repeated irradiation damage. According to previous study, the incidence of carotid blowout is approximated 2.6 percent and higher in patients treated with accelerated fraction of radiotherapy. Furthermore, 60 percent of patients with carotid blowout syndrome are fatal, which requires emergent intervention [1,2]. Despite high morbidity and mortality rates among patients with carotid blowout syndrome, surgical ligation is rarely indicated due to high risk of neurological complications. Hence, the main treatment of carotid blowout syndrome has been shifted to endovascular treatment including transcatheter arterial embolization and covered stent implantation recently to prevent more significant neurological complications.

Compared to traditional surgical ligation, carotid covered sent for reconstruction of affected vessels may be a choice with lower risk and complications to emergent hemostasis and preserve the function of the carotid artery.

Reference

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