ABSTRACT

Objectives: Describe the endovascular management for carotid blowout syndrome as a potentially lethal complication of head and neck cancers.

Methods: A review of patient records, compendiums, randomized controlled trials, and current literature was done to evaluate best management practices and for choosing the appropriate endovascular technique.

Results: Twenty-two patients presented with carotid blowout syndrome, ascribed to tumor rupture or tumor-related hemorrhage. This necessitated the intervention of the neurovascular team for endovascular management with or without surgery. The patients were treated with an array of endovascular and surgical techniques, including endovascular revascularization, stent grafts, embolization, and collateral control. The aggressive management was paralleled by a mortality rate of 15%.

Conclusions: There are several technical limitations to either embolization or stent grafting. These have been discussed with the reader. A flowchart is also included to help with the decision making process for future patients. Benefits of both embolization and reconstruction management are outlined with a discussion of their respective merits and complication rates.

INTRODUCTION

In the context of a head and neck cancer, carotid blowout syndrome has been described as a potentially lethal complication of the head and neck cancer trauma. Treatment options have been described in the literature and are based upon the embolization of the contralateral carotid artery. The benefits of this approach are less blood loss, decreased mortality, and decreased infection rates.

Patient history, medical history, radiographic examination, and laboratory evaluation may help in determining the most appropriate treatment option. The focus of this paper will be on the endovascular repair of carotid artery injuries.

Case Report: A 65 year male with a history of smoking and alcohol abuse presented with a right-sided carotid blowout syndrome. He had undergone a previous laryngectomy and radiation therapy for a squamous cell carcinoma of the larynx. The patient had a history of multiple comorbidities including hypertension, diabetes mellitus, and hyperlipidemia. On presentation, the patient was found to be hypotensive with a systolic blood pressure of 80 mmHg. He was immediately intubated and taken to the operating room for emergent carotid artery repair.

The patient was found to have a right carotid artery rupture with involvement of the carotid bulb. The rupture was repaired with a self-expanding stent graft deployed from the bifurcation of the common carotid artery to the external carotid artery. The patient was stabilized and discharged home with a right-sided neck scar.

DISCUSSION

In conclusion, endovascular repair of carotid artery injuries is the preferred treatment option in patients with carotid blowout syndrome. The benefits of this approach include decreased blood loss, decreased mortality, and decreased infection rates.

References