Carotid blowout syndrome

Carotid blowout syndrome (CBS) is a life-threatening emergency resulting from the compromise of the carotid artery caused by malignancy in the head and neck.

Case series

Retrospective analysis of clinical data of patients with head and neck cancer-related CBS treated by endovascular intervention and/or EC/IC vascular bypass, analysis of its bleeding control, neurological complications, and survival results.

Results: Thrity-seven patients were included. Twenty-five were associated with external carotid artery (ECA); twelve were associated with internal or common carotid artery (ICA/CCA). All patients with ECA hemorrhage were treated with endovascular embolization. Of the 12 patients with ICA/CCA hemorrhage, 9 underwent EC/IC bypass, 1 underwent endovascular embolization, and 3 underwent endovascular stenting. For patients with ECA-related CBS, the median survival was 6 months, and the 90-day, 1-year, and 2-year survival rates were 67.1%, 44.7%, and 33.6%, respectively; the estimated rebleeding risk at 1-month, 6-month, and 2-year was 7.1%, 20.0%, and 31.6%, respectively. For patients with ICA/CCA-related CBS, the median survival was 22.5 months, and the 90-day, 1-year, and 2-year survival rates were 92.3%, 71.8%, and 41.0%, respectively; the estimated rebleeding risk at 1 month, 6 months, and 2 years is 7.7%,15.4%, and 15.4%, respectively. ICA/CCA-related CBS patients have significantly longer survival time and lower risk of rebleeding, which may be related to the more use of EC/IC vascular bypass as a definite treatment.

Conclusions: For patients with ICA/CCA-related CBS, if there is more stable hemodynamics, longer expected survival, EC/IC vascular bypass is preferred [1)].

Seventeen carotids in 15 patients, whose ages ranged from 20 to 84 years (mean, 70.4 years), were treated with 20 covered nitinol (Viabahn Endoprosthesis, Gore, Flagstaff, Arizona) stents. Three patients were treated acutely for bleeding from carotid blowout, and 12 were treated prophylactically for threatened carotid blowout. All patients were given periprocedural dual antiplatelet therapy. No thromboembolic or ischemic complications were noted. Hemorrhage after treatment occurred in 4 patients. In 2 patients, the hemorrhage was from a source not covered by the stent.

The use of covered stents is a simple, safe, and effective method for treating or preventing carotid blowout syndrome in patients with head and neck malignancy. Carotid artery reconstruction with covered stents may minimize the risk of ischemic complications associated with endovascular or surgical carotid sacrifice [2)].

Paediatricians commonly encounter neck lumps during their routine clinical practice; vascular abnormalities, such as (pseudo)aneurysms, are a rare cause of these. Pseudoaneurysms of the carotid artery in children are usually the result of blunt or penetrating trauma, infection or vasculitis/connective tissue disorders. They can present with a variety of symptoms including neck pain, as a pulsatile neck mass or with compressive symptoms (for example, cranial nerve palsies or

dyspnoea). Pseudoaneurysms carry a risk of rupture in which case they are fatal, unless immediate treatment is provided.We report a 17-month-old male child with idiopathic carotid artery blowout syndrome presenting with acute oropharyngeal haemorrhage leading to asystolic cardiac arrest. He was successfully resuscitated and emergency embolisation controlled the bleeding. Despite extensive left hemispheric infarct, he has survived.Carotid artery blowout syndrome needs to be recognised as a potential cause of major haemorrhage in childhood. The purpose of this case report is to remind readers of the differential diagnosis and work-up of a child presenting with a neck lump, to highlight important aspects of the acute management of major haemorrhage and massive blood transfusion in paediatrics, to describe the aetiology, presentation and management of carotid artery pseudoaneurysm in children and to discuss long term rehabilitation in patients with consequent neurological sequelae (including the need for input from multiple specialty teams) [3].

1)
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2)
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3)
Stilwell PA, Robertson F, Bhate S, Sutcliffe AG. A child in shock: carotid blowout syndrome. Arch Dis Child Educ Pract Ed. 2019 Aug 10. pii: edpract-2019-317052. doi: 10.1136/archdischild-2019-317052. [Epub ahead of print] PubMed PMID: 31401552.