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# Prevention and management of post-radiation carotid blowout syndrome in patients with head and neck cancer: A systematic review

**Objectives:** Carotid blowout syndrome (CBS) refers to rupture of the extracranial carotid artery or its major branches, a rare and life-threatening acute hemorrhage. This review aimed to evaluate managements and survival outcomes in patients with head and neck cancers with post-radiation carotid blowout syndrome.

**Methods:** A systematic review of published literature was performed. Information including management, complications, and outcomes of CBS were collected.

**Results:** A total of 41 articles and 918 patients were included in the systematic review. Two third of CBS lesions involving the internal or common carotid artery, and the rest involving the external carotid artery. The managements of CBS mainly included embolization, stent, surgical ligation, and bypass. The complications of management for CBS included stroke, neurologic deficits, rebleeding, and infection. Short-term survival following treatment of CBS shows high survival rates, while long-term survival related to the underlying disease demonstrated high mortality.

**Conclusions:** Embolization and stent were the mainstream management of CBS. Bypass was technically challenging but showed a promising outcome treating CBS.

**Key Words:** Carotid blowout, Head and neck cancer, Radiation therapy, Embolization, Stent, Bypass

## 吴平安

香港大学深圳医院头颈外科副顾问

# 头颈癌患者放疗后颈动脉爆裂综合征的预防和管理：一项系统评价

**目的：**颈动脉爆裂综合征（CBS）是指颅外颈动脉或其主要分支破裂，是一种罕见且危及生命的急性出血。本综述旨在评估伴有放射后颈动脉爆裂综合征的头颈癌患者的治疗和生存结果。

**方法：**对已发表的文献进行系统回顾。收集了包括CBS的管理、并发症和结果在内的信息。

**结果：**共有41篇文章和918名患者被纳入系统评价。三分之二的CBS病变累及颈内动脉或颈总动脉，其余累及颈外动脉。CBS的处理主要包括栓塞、支架、手术结扎、搭桥等。CBS的并发症包括中风、神经功能障碍、再出血和感染。CBS治疗后的短期生存率较高，而与基础疾病相关的长期生存率较高。

**结论：**栓塞和支架是CBS的主流治疗方法。颅内外血管搭桥术在技术上具有挑战性，但在治疗CBS方面显示出有希望的结果。

**关键词：**颈动脉爆裂，头颈癌，放射治疗，栓塞术，支架，搭桥术