



Research Week 2022

Management of acute hemorrhage after radiation therapy for oropharyngeal squamous cell carcinoma

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Keywords

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Abstract

Background: Spontaneous oropharyngeal hemorrhage is a rare, life-threatening complication occurring during or after radiation therapy for the treatment of oropharyngeal cancer. Acute management of hemorrhage in the oropharynx is resource-intensive and requires a multidisciplinary approach.

Objective: This project aimed to study the entire workflow for the management of oropharyngeal hemorrhage in patients at a high-volume head and neck cancer program.

Subjects and Methods: We performed a case series retrospective chart review of 11 patients diagnosed with primary OPSSC. Included patients suffered oropharyngeal hemorrhage after radiation therapy between February 2020 and April 2021 and were transferred or directly presented to OHSU. We used the electronic medical record to collect clinical and demographic characteristics.

Results: The mean number of days between completion of radiation therapy and onset of hemorrhage was 88 days. Patients underwent emergent intubation (91%) and/or tracheostomy (64%), manual tamponade (45%), and/or IV Tranexamic acid (36%). Angiography for evaluation and embolization of external carotid artery (ECA) branches was performed on most patients (91%). In 40% of patients, the source of bleeding was the ECA proper, the lingual artery in 30%, and the facial and internal maxillary arteries in 20% of patients. Embolization procedures were followed by surgery in 64% of patients, with 36% requiring a free flap and mandible excision, with resection of necrotic soft tissue. After recovery from surgery, 27% of patients were discharged with a tracheostomy and 64% with a feeding tube. Three patients died.

Conclusion: Managing spontaneous oropharyngeal hemorrhage requires a multidisciplinary approach, starting with rapid response in the ED for airway and bleeding control, endovascular control by neuro-interventional radiology, and head and neck surgical management. These resources are often readily available under one roof only within larger academic institutions. After discharge, close follow-up of the patients is necessary to identify risk of recurrence and long-term morbidity.