Acute arterial hemorrhage following radiotherapy of oropharyngeal squamous cell carcinoma.

Vascular erosion is a rare but life-threatening complication after radiotherapy. The authors report on acute arterial bleeding and its therapy following radiotherapy of oropharyngeal tumors. Ten patients with oropharyngeal squamous cell carcinoma of any stage developed foudroyant acute arterial hemorrhage 3-46 months (14.4 +/- 5.1 months) after primary (5/10) or adjuvant radio(chemo)therapy (R[C]T). All patients had a history of recurrent minor bleeding episodes and showed deep mucosal ulcerations also outside the primary tumor region. A life-threatening arterial hemorrhage appeared in the area of these mucosal defects in the pharyngeal region. Affected vessels were the common carotid artery as well as the internal and the external portion with branches like the ascending pharyngeal and superior thyroid arteries. Treatment consisted of emergency intubation or tracheotomy followed by exposure and package of the pharynx and surgical ligation and/or embolization. 6/10 patients (all hospitalized) survived the episode, however, lethal outcome in 4/10 patients (outpatients) was related to asphyxia as a result of blood aspiration or exsanguination. None of the patients revealed evidence of persistent or recurrent tumor disease as proven by biopsy/autopsy and imaging technique.
following primary or adjuvant R(C)T represents a rare and potentially life-threatening complication requiring immediate emergency treatment involving head and neck surgeons, anesthesiologists and neuroradiologists. For patients with oropharyngeal neoplasms treated by R(C)T and showing recurrent bleeding episodes and mucosal ulceration particularly after the acute treatment phase, hospitalization with prophylactic surgical ligature or embolization of affected arteries is recommended.