Iatrogenic internal carotid artery perforation during a thrombectomy attempt

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Abstract

Introduction: Despite rare, complications are an inevitable offset to the benefits thrombectomy brings about. Arterial perforation is among the most feared, as it may be associated with poor functional outcome and higher mortality rates.

Case Report: A 66-year old male with laryngeal carcinoma was submitted to total laryngectomy, complete cervical lymphadenectomy and phonatory prosthesis insertion with curative intent. During immediate postoperative care, he developed right hemiparesis, left gaze preference and right hemianopia (NIHSS=20). CT scan showed early signs of infarction in the insular and frontal cortices and there was increased mean transit time in most of the area supplied by the left middle cerebral artery (MCA) on CT perfusion. CT angiography revealed a left-sided tandem occlusion of the proximal internal carotid artery (ICA) and distal M1 segment of the MCA. The patient was taken for thrombectomy and while trying to navigate past the proximal occlusion with a hydrophilic guidewire, ICA perforation was made evident through contrast extravasation. The artery was temporarily occluded with a balloon catheter but extravasation persisted. Six detachable coils were then inserted to occlude the ICA, successfully stopping the bleeding. CT scans on the following days showed a complete superficial MCA territory infarct, having spared the greater part of the basal ganglia.

Conclusion: We present the case of an ICA perforation during a thrombectomy procedure. Cases like these remind us that risks are inherent to this type of treatment and even if they are vastly outweighed by the potential benefits, cases should always be assessed individually.