Mycotic Pseudoaneurysm of Carotid Artery as a Rare Complication of Lemierre Syndrome

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A 74-year-old man presented to the emergency department complaining of fever, swelling at the neck, and dysphonia. He had no significant medical history except for dental care a few days before. Computed tomography angiography showed an internal jugular vein (IJV) thrombophlebitis with a venous wall rupture (Figure 1), in continuity with a voluminous abscess (Figure 2) and surrounding a right carotid bulb pseudoaneurysm. Emergency open surgery was performed under general anesthesia, and no shunt was necessary. The carotid artery was replaced with cryopreserved arterial allograft bypass after ligation of the external carotid artery and the IJV. The postoperative course was uneventful. Intraoperative bacterial sampling found *Fusobacterium necrophorum*, supporting the diagnosis of Lemierre syndrome. Antibiotherapy was modified for a combination of amoxicillin/clavulanate and metronidazole. Additional examinations ruled out underlying neoplastic disease or human immunodeficiency virus infection. Antibiotherapy was stopped at 6 weeks after a satisfactory 18F-fluoro-D-deoxyglucose positron emission tomography—computed tomography scan. Follow-up computed tomography angiography at 6 months found a patent bypass.

Lemierre syndrome, characterized by an oropharyngeal infection associated with IJV septic thrombosis, is commonly complicated with bilateral pneumopathy caused by septic emboli. Arterial complications including carotid mycotic pseudoaneurysm have rarely been described. It can be explained both by septic emboli infecting and weakening the arterial wall and by a contiguous
infectious process involving the vasa vasorum and periarterial lymphatics up to the carotid wall. Replacement of the carotid artery by a venous-arterial allograft should be offered without conservation of the external carotid artery, which technically complicates the procedure for minimal benefit.

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