Abstract

Objective(s): To discuss the natural history and management of isolated innominate artery dissection

Methods: Case report

Results: A 64-year-old male with a past medical history of hypertension and hyperlipidemia was noted to have left facial droop, dysarthria and left arm weakness following sexual activity. His symptoms progressed to left hemiplegia. On admission to the Emergency Department, he was noted to be severely hypotensive with systolic blood pressures between 60 and 70mmHg (left arm). His home medications included amlodipine, ramipril and atorvastatin. Carotid duplex ultrasound revealed dissection of the right common carotid artery with minimal stenosis of the right and left internal carotid arteries. CT scan of the head revealed no acute intracranial hemorrhage, mass or mass effect or midline shift. Imaging studies of the head, neck and chest revealed a dissection flap at the origin of the innominate artery with extension into the right common carotid artery. Severe compression of the entire right common carotid artery by the thrombosed false lumen was seen. The right anterior and middle cerebral arteries, left common, internal, and external carotid arteries and bilateral vertebral arteries were patent. The patient was admitted to the Intensive Care Unit and his symptoms resolved with intravenous heparin infusion and the temporary use of intravenous Levophed. The latter medication was weaned over several days. MRI on hospital day 4 revealed multiple right fronto-parietal acute infarctions with involvement of the medial temporal lobe and hippocampus. The dissection flap was re-demonstrated within the innominate artery and the lumen of the common carotid artery was expanded. He was discharged on hospital day 14 on Coumadin. Examination nine months after discharge revealed no neurological deficits. Imaging studies demonstrated patentcy of the innominate, common and internal carotid arteries. The dissection flap in the innominate artery persisted; there were no stenotic or aneurysmal changes. He had returned to full activity. The natural history and suggested management of isolated innominate artery dissection will be discussed.

Conclusions: Successful treatment of isolated acute innominate dissection varies from medical management to open or endovascular procedures.