Lupus-Associated Internal Carotid Artery Dissecting Aneurysm: An Occult Association

Sir,

Dissecting aneurysm (DA) is an uncommon vascular pathology, most commonly affecting the aorta. Internal carotid artery (ICA) DA amounts to 0.5–3 per million persons and contributes to about 2% episodes of acute ischemic strokes.\(^1\) Pathogenesis involves intimal tearing forming subintimal hematoma and arterial wall weakening, favoring aneurysm formation.\(^2\) Various etiologies of ICA DA include trauma, head and neck surgeries, and various connective tissue disorders.
such as Ehlers-Danlos syndrome type IV, Marfan syndrome, cystic medial necrosis, polycystic kidney disease, osteogenesis imperfecta type I, fibromuscular dysplasia, and α1-antitrypsin deficiency.[3] Spontaneous dissection of ICA secondary to systemic lupus erythematosus (SLE) and consequent aneurysm formation is scarcely reported.[1,4]

A 31-year-old female patient having a history of SLE since 5 years, presented to us with chief complaints of headache and diplopia of the right eye. Her current medications included azathioprine and mycophenolate mofetil. After a battery of radiological investigations (magnetic resonance imaging [MRI] with angiography [MRA] and digital subtraction angiography [DSA]), right cavernous sinus ICA DA was revealed [Figure 1a and b]. She was then scheduled for endovascular placement of flow-diverter under general anesthesia and started on aspirin 150 mg once daily for 3 days. On the day of the procedure, anesthetic induction and endotracheal intubation were done with fentanyl, propofol, and rocuronium followed by inhalation-based maintenance anesthesia. Flow diverter (4.5 × 4.0 mm) was placed into the right ICA via the right femoral artery, proximally from high arched petrous segment to just distal to ophthalmic division. Intraprocedural adverse events were ruled out with postprocedure angiography and CT scan of the brain. Neuromuscular blockade was reversed and awake tracheal extubation was done successfully. In the postoperative period, the patient was started on dual antiplatelet drug therapy (aspirin and clopidogrel). The rest of the course in the hospital was uneventful and she was discharged on the 4th postoperative day without any neurological sequelae.

The SLE is a chronic autoimmune inflammatory disease with a wide spectrum of clinical and serological manifestations caused by autoantibody production, complement activation, and immune complex deposition. Collagen tissue alteration in SLE leads to the weakening of vessel walls.[2,3] Increased arterial stiffness could enhance the risk of dissection of carotid arteries. Furthermore, increased prevalence of hypertension and dyslipidemia in SLE patients could increase vulnerability to arterial dissection by atherogenesis and degenerative artery changes.[2,3] Therefore, the population with SLE is more prone to ischemic or hemorrhagic stroke, attributable mortality being 10–15%.[1] With this correspondence, we would like to emphasize that in SLE patients if there is any neurological complaint, vascular pathology must be ruled out. Imaging studies can lead to early diagnosis and timely management can prevent catastrophic events.

**Declaration of patient consent**

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient (s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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**Conflicts of interest**

There are no conflicts of interest.

Chandrakant Prasad, Ankur Khandelwal, Swapnil Patel,
Mangesh Ganesh Mulaokar, Arvind Chaturvedi
Department of Neuroanaesthesia and Critical Care,
All India Institute of Medical Sciences, Ansarinagar,
New Delhi, India

Address for correspondence: Dr. Ankur Khandelwal,
Department of Neuroanaesthesia and Critical Care,
All India Institute of Medical Sciences, Ansarinagar, New Delhi - 110 029, India.
E-mail: ankurchintus@gmail.com

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