

TEV E PATOLOGIE CARDIOVASCOLARI

## LEFT INTERNAL CAROTID ARTERY THROMBOSIS IN A PATIENT WITH ANTIPHOSPHOLIPID ANTIBODY SYNDROME SUCCESSFULLY TREATED WITH ECULIZUMAB.

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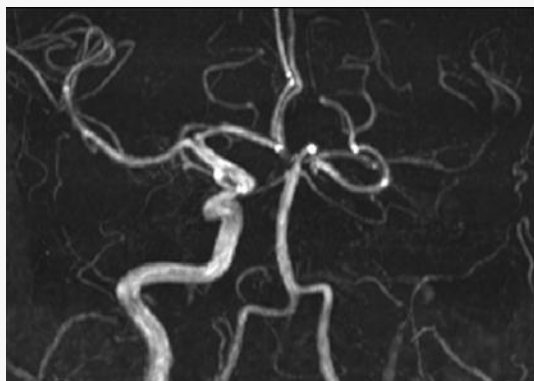
**Background and Aims:** Anti-phospholipid syndrome (APS) is characterized by thrombosis and pregnancy complications due to persistent anti-phospholipid antibodies, with stroke being the most common arterial thrombosis. The complement system has emerged as a key factor in APS-related events, offering potential for targeted therapies.

**Methods:** We present the case of a 50-year-old woman diagnosed with APS who suffered a large vessel occlusion despite being on warfarin. **Results:** The patient has a history of APS with overlap undifferentiated connective tissue disease since 2013, initially presenting with thrombosis of the internal jugular, subclavian, axillary, and left brachial veins, which necessitated the initiation of warfarin therapy. In 2022, she experienced a recurrence of bilateral femoropopliteal deep vein thrombosis with pulmonary embolism after switching from warfarin to Xarelto. Consequently, warfarin was reintroduced, but the patient missed multiple outpatient follow-ups. On January 1, 2025, she visited the Emergency Department (ED) reporting paresthesia on the right side of her body for four days, with an INR of 2.2. A brain CT scan revealed no acute changes, and she was instructed to undergo brain MRI, angioRM, and electroencephalography. On January 27, she returned to the ED with new paresthesia and a fluctuating headache on the left side, with an INR of 2.02, leading to her admission to the Neurology Department. By January 28, she exhibited mild right facial-brachial sensory hemisindrome (NIHSS2), prompting initiation of a stroke protocol. An MRI with angio-MRI revealed recent ischemic lesions in

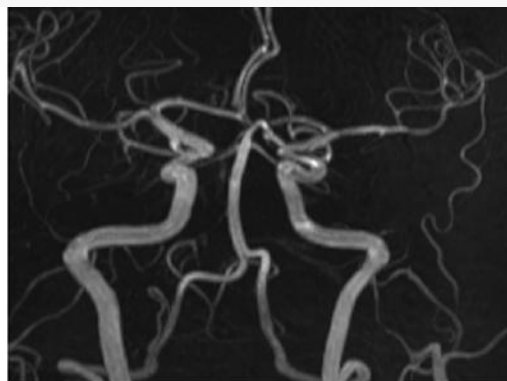
the left hemisphere, complete occlusion of the left carotid artery, and poor flow in the middle cerebral artery. Cerebral arteriography confirmed reduced calibre and slow flow in the left internal carotid artery. The patient's condition deteriorated rapidly, presenting with mutism, gaze deviation, right hemiplegia, and VII cranial nerve deficits (NIHSS 20). Intubation was necessary, and a thromboaspiration attempt was unsuccessful. A stent was placed during an IV infusion of canrelor, but this led to early reocclusion, prompting the administration of aspirin 500 mg IV and continuation of anticoagulation therapy with LMWH. Twelve hours later, control arteriography showed thrombosis of the intracranial stent at the carotid siphon. Given the poor response to anticoagulant and antiplatelet treatment, we initiated therapy with eculizumab 900 mg weekly for four weeks. Twenty-four hours after the second eculizumab infusion, the patient was extubated, showing only mild residual sensorimotor hemisindrome on the right. A follow-up cerebral MRI with AngioMRI at four weeks demonstrated no pathological enhancement in black blood sequences but revealed moderate stenosis at the carotid siphon and mild stenosis at the origin of the left middle cerebral artery. Three months post-event, after a rehabilitation program, the patient exhibited only mild dysesthesia in her left deltoid region.

**Conclusions:** This case is the first to report the treatment of arterial thrombosis using eculizumab. Our findings support the potential application of eculizumab in APS, highlighting its beneficial effects beyond what has previously been documented in the catastrophic variant of this disorder.

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Pre-eculizumab



Post-eculizumab (after 4 weeks)