

In-stent thrombosis after carotid artery stenting in a non-responder to a dual antithrombotic therapy

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Background:

Internal carotid artery (ACI) stenosis is a common cause of ischemic stroke. Stenoses above 70% are considered as clinically significant. Treatment of a high-grade carotid stenosis is either surgical or endovascular and carotid stenting (CAS) is used as the method of choice in indicated patients.

Case presentation:

We report a 57-year-old female patient who was admitted to the hospital due to recurrent transient ischemic attacks (TIA) with clinical presentation of dysarthria and leftsided faciobrachiparesis with sensory loss. The patient suffered from hypertension and had a record of cerebrovascular occurrences in family history. MRI showed acute hypoperfusion lesions, and CT angiography confirmed symptomatic high-grade stenosis of right ACI. The left ACI was occluded. The patient underwent a successful right-sided CAS. Immediate carotid ultrasound finding was accordingly and the patient was discharged on dual therapy with Aspirin and clopidogrel. Three months after the procedure, the patient was re-admitted due to reoccurrence of TIA with motor, sensory and visual impairment in the left half of the body. Control angiography indicated the presence of "in-stent" stenosis. Ultrasound revealed a thrombus in the proximal part of the stent, and aggregometric treatment showed complete non-reactivity to both antithrombotic drugs. The patient underwent balloon dilatation of the stenosis, after which only insignificant (<30%) stenosis remained. Alternative antithrombotic therapy with ticagrelor was introduced. With neurological status improved, the patient was discharged. Follow-ups after one and two years showed normal flow through the stent.

Conclusion:

Dual antiaggregation is a common therapy after carotid stenting, during first three months followed by acetylsalicylic acid long-term. We present a patient with an extremely rare combination of resistance to both drugs and a clinically relevant in-stent thrombosis. This case illustrates the importance of regular follow-ups after CAS as well as the choice of the appropriate antithrombotic therapy in secondary prevention of stroke.

Keywords: antithrombotic therapy, carotid artery stenosis, carotid artery stenting, in-stent thrombosis, ischemic stroke