50. MULTIPLE CONSECUTIVE THROMBOTIC EVENTS – INVESTIGATING FOR ETIOLOGY (CASE REPORT)

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Introduction. Thrombosis represents the abnormal presence of a blood clot within a blood vessel. Under certain conditions, the thrombus can become an embolus, and lead to obstruction of various vascular territories. We report a case of multiple consecutive thrombotic events and aim to emphasize the difficulties in identifying the etiology in this specific case.

Case presentation. A 78-year-old male presented to the Emergency Department with a history of arterial hypertension and permanent atrial fibrillation (AF) (CHA2DS2-VASc score = 3) and no anticoagulant treatment. Three days earlier he presented rest dyspnea, atypical chest pain, and dizziness. Then, he developed severe pain and functional impotence of the left upper limb. On physical examination he presented with cyanosis, paresthesia, and paralysis of the left upper limb, with no pulse at the brachial, ulnar, and radial arteries, irregular heartbeats, and O2 saturation of 80%, with normal pulmonary auscultation. Laboratory data indicated hypoxia with normocapnia and mild respiratory alkalosis, positive D-dimer test, and slightly elevated troponin I. The ECG showed AF and negative T-waves in leads V1-V5. CT angiography revealed large emboli in both pulmonary arteries and total occlusion of the left subclavian artery.

Discussion. Surgical embolectomy by transbrachial approach was performed and the patient was started on unfractionated heparin. At the subsequent workup, echocardiography showed moderately enlarged right ventricle (RV) with moderately impaired systolic function sparing the RV apex, moderate tricuspid regurgitation, and systolic pulmonary artery pressure of 60 mmHg. Color Doppler and contrast ultrasound revealed patent foramen ovale (PFO). Several tumor markers were investigated, with negative results. After 32-h of hemodynamic stability, the patient presented right hemiparesis and mixed aphasia with sudden onset. Cranial CT showed a large left-sided ischemic stroke. Doppler ultrasound indicated 30% stenosis of the right and total occlusion of the left internal carotid artery. The patient was discharged 2 weeks later on oral anticoagulation and aspirin. At 3 months follow-up there was no recurrence of thrombotic events and no improvement of neurological sequels.

Conclusion. In patients with multiple thrombotic events establishing a definitive etiologic diagnosis is a major challenge. Direct, concomitant embolization from deep vein thrombosis (DVT) into the pulmonary and systemic circulation, through the PFO, deserves to be considered. DVT leading to pulmonary embolisms, with consequent opening the PFO via increased right atrial pressure is also possible, setting the route for subsequent paradoxical embolization and systemic embolic events. However, the cause could also be DVT leading to pulmonary embolism, and AF leading to systemic embolism.