

Cerebellar stroke and aortic arch thrombosis

Zawał mózdzku i zakrzepica łuku aorty

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A 64-year-old male patient was admitted to our clinic having been diagnosed with an ischaemic cerebellar stroke (Fig. 1). The symptoms began a day before, with ataxia, speech disturbances, and apraxia of the right body side. The laboratory tests at admission showed no abnormalities. Computed tomography showed a distinct, compact structure in the lumen of the ascending aorta and aortic arch (Fig. 2). All the branches of the aortic arch were intact, but there was an acute closure of the left vertebral artery (Fig. 3). To prevent further embolisation, we performed an emergency surgery. After median sternotomy, the ascending aorta was cannulated at the level of sinotubular junction. Then we cannulated the right atrium with a two-stage cannula, and a left ventricular vent was placed. The brachiocephalic artery and the left carotid artery were identified. The patient was cooled down to 30°C and 1 L crystalloid cardioplegia was given. The aorta was cross-clamped. Within 5 min of circulatory arrest the aorta was opened to inspect the arch. A large intraluminal thrombus (Fig. 4) was attached to the aortic wall with a pedicle, going along the aortic arch and partially occluding the left subclavian artery. After removal of the fragile and partially fragmented thrombus, the aortic arch and its branches were inspected. The aortotomy was closed. After rewarming and reperfusion, we could wean the patient from the cardiopulmonary bypass. The first day after surgery, our patient was awake and extubated. The symptoms of stroke were still present, especially coordination disturbances and indistinct speech. In postoperative course, we included oral anticoagulation with phenprocoumon into his therapy, and on the fifth postoperative day we referred him to a neurological clinic for blood coagulation diagnostics and intensive rehabilitation. Thoracic aortic mural thrombus (TAMT) in patients without aortic atherosclerosis is a very rare pathology. There is a danger of potentially catastrophic embolic complications, which affect most frequently the lower extremities. However, in some cases, TAMT can become a source of central nervous system embolisation. In our patient, it occurred in an atypical location, through the subclavian and vertebral artery. To date, no such case has been reported. The management strategy of TAMT remains controversial. There is no strong evidence showing whether anticoagulation or surgery could assure better outcomes. Also, some interventional approaches, such as aspiration or exclusion of the thrombus with a stentgraft, have gained recognition recently. There are no long-term data that could support any of the above-mentioned therapeutic strategies. We believe that symptomatic TAMT should be treated surgically, after taking the patient's comorbidities and the location of the thrombus into consideration.

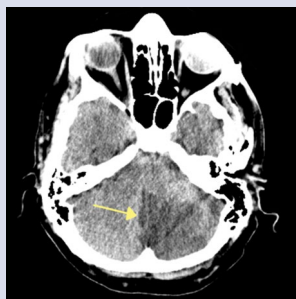


Figure 1. Infarction of the left cerebellar hemisphere (arrow); preoperative computed tomography



Figure 2. Thrombus in the ascending aorta and aortic arch (arrow); preoperative computed tomography

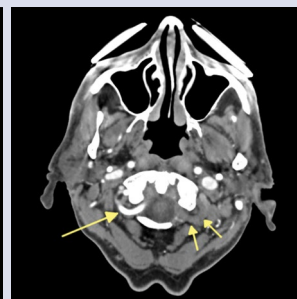


Figure 3. Closure of the left vertebral artery (double arrow). The right vertebral artery is visualised with contrast (single arrow); preoperative computed tomography

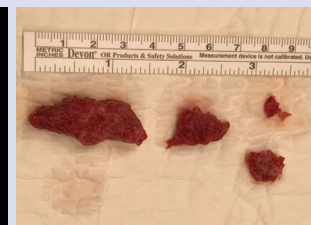


Figure 4. Removed thrombus

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Conflict of interest: none declared

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