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STUDIUM PRZYPADKU / *CLINICAL VIGNETTE*

# First non-complicated thrombolysis in a young patient with Marfan syndrome and brainstem ischaemic stroke

## Pierwszy przypadek niepowikłanej trombolizy systemowej udaru niedokrwiennego pnia mózgu w zespole Marfana

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The prevalence of neurovascular complications and their treatment in patients with Marfan syndrome (MS) is not well known. We have found only one report of a stroke patient with MS treated with thrombolysis, complicated by intracranial haemorrhage. We present, for the first time, a case of an effective intravenous thrombolysis in a young patient with MS and acute ischaemic brainstem stroke of probable cardioembolic aetiology. A 34-year-old patient with known MS was admitted to the emergency department with sudden onset of double vision and right face and tongue paresthesias that had developed 1.5 h before presentation (without any preceding head or neck trauma). Five months before, a successful Bentall procedure with biological conduit insertion was performed in the patient, to treat the aortic aneurysm and aortic valve dysfunction. He had been treated with oral anticoagulant (acenocumarolum) until 2 weeks before the stroke onset, when the anticoagulant was switched to acetylsalicylic acid. Echocardiography (ECHO) a month prior to the emergency admission had shown ejection fraction (EF) of 65% and no dysfunction of the conduit. Neurological examination revealed right central facial palsy, hypoesthesia in the second and third branch of the right trigeminal nerve, right ptosis with myopia, upward gaze restraint, and downward gaze paresis which suggested left trochlear nerve dysfunction. On general examination, the patient was haemodynamically stable (blood pressure 130/80 mm Hg, normal sinus rhythm 70/min) with typical features of MS — tall posture and long fingers. Initial magnetic resonance diffusion weighted imaging (DWI) did not show any areas of diffusion restriction, however, two small chronic lesions of probably vascular origin were found in the left hemisphere. 4 h and 20 min after the onset of symptoms, the patient received thrombolytic treatment with 80 mg (0.9 mg/kg bodyweight) of Alteplase. There were no complications of the treatment and the neurological symptoms resolved completely during the next 11 h. Control DWI performed 3 days later revealed a new, non-corresponding, discrete lesion in the left middle cerebellar peduncle (Fig. 1). The Doppler ultrasound test and the computed tomography angiography (Fig. 2) showed tight kinking of both internal carotid arteries and tortuous vertebral arteries, but without dissection. Transthoracic and transoesophageal ECHO did not reveal any abnormalities, and EF was 65%. Blood testing on possible prothrombotic state or autoimmune process was negative. The patient was discharged home 8 days after the incident with no remaining symptoms. The presented case of thrombolytic treatment in a MS patient was free of haemorrhagic complications, despite tortuous extracranial vessels and relatively short period between the Bentall operation and the Alteplase treatment. It is obvious, however, that the safety of ischaemic cerebral stroke Alteplase treatment in patients with MS remains to be confirmed.

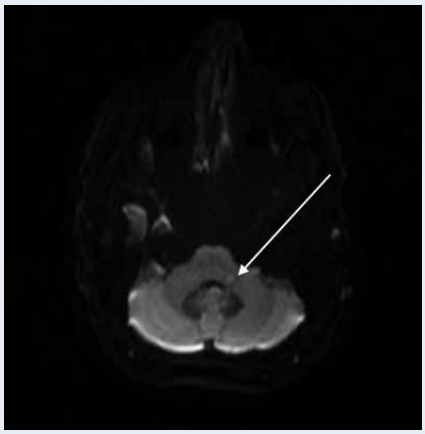

Figure 1. A new, non-corresponding, discrete lesion in the control diffusion weighted imaging (arrow)

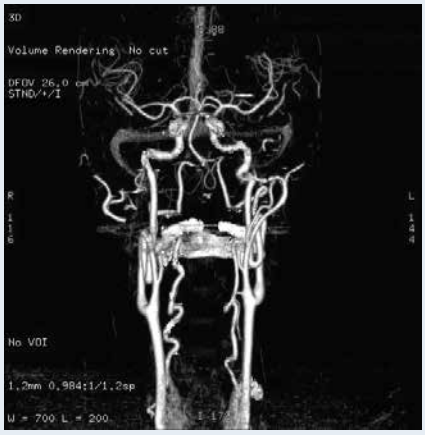


Figure 2. Computed tomography angiography excluded dissection of tight kinking of both internal carotid arteries and tortuous vertebral arteries

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***Conflict of interest:*** *none declared*