ACUTE STROKE IN EMERGENCY ROOM TREATED WITH NEW INTERNATIONAL PROTOCOL - THROMBOLYSIS

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ABSTRACT:
THIS PRESENTATION REFERS TO THE CURRENT MANAGEMENT AND TREATMENT OF ADULTS WITH ISCHEMIC STROKE EXEMPLIFYING RAPID NEUROLOGICAL RECOVERY THANKS TO NEW METHODS OF TREATMENT USING ALTEPLASE THROMBOLYSIS ACCORDING TO NEW GUIDELINES FOR THE TREATMENT OF ISCHEMIC STROKE.

KEY WORDS: STROKE, GUIDELINES, THROMBOLYSIS, ALTEPLASE

INTRODUCTION

This was a case study in which a male patient (NN) with acute ischemic stroke was treated in the Emergency Room of the University Hospital of Emergency Bucharest by applying thrombolysis with alteplase as treatment[2] protocol[3]. After the initial treatment phase, the patient was admitted to the Clinic of Neurology of the same hospital.

MAIN TEXT

Patient NN is 48 years old and is known with surgery about a month ago for a herniated disc in the lumbar spine. He is hypertensive and follows home treatment with Enalapril. NN is brought to the emergency room of the University Hospital of Emergency Bucharest, for sudden alteration of consciousness and motor deficit in his left limbs. Symptoms started 2 hours and 30 minutes prior to hospital presentation with a violent headache, followed by fallout episode from his own height and loss of consciousness. Subsequently, the patient has progressive alteration of general state and left limb motor deficit (debut 09:00).

The neurological objective at emergency room: 1) At the time of presentation: drowsy patient, vigilant at verbal stimuli, does not speak, performs inconstant simple orders, mydriasis in his left eye, left hemiplegia and paretic motor limb deficit in the right limbs, the plantar cutaneous reflex does not occur bilaterally. 2) After 20 minutes the Glasgow Coma Scale score was 4 points, left eye mydriasis and photo-motor reflex absent at the same level,

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[2] The treatment has benefits shown in *Effect of treatment delay, age, and stroke severity on the effects of intravenous thrombolysis with alteplase for acute ischaemic stroke: a meta-analysis of individual patient data from randomised trials*
[3] The protocol described in *Diagnostics and treatment guide for cerebrovascular diseases* was used

tetraparesis with plegic leftlimb motor deficit, nociceptive stimulation is defended in abnormal extension of the upper limbs, plantar cutaneous reflex does not occur bilaterally.

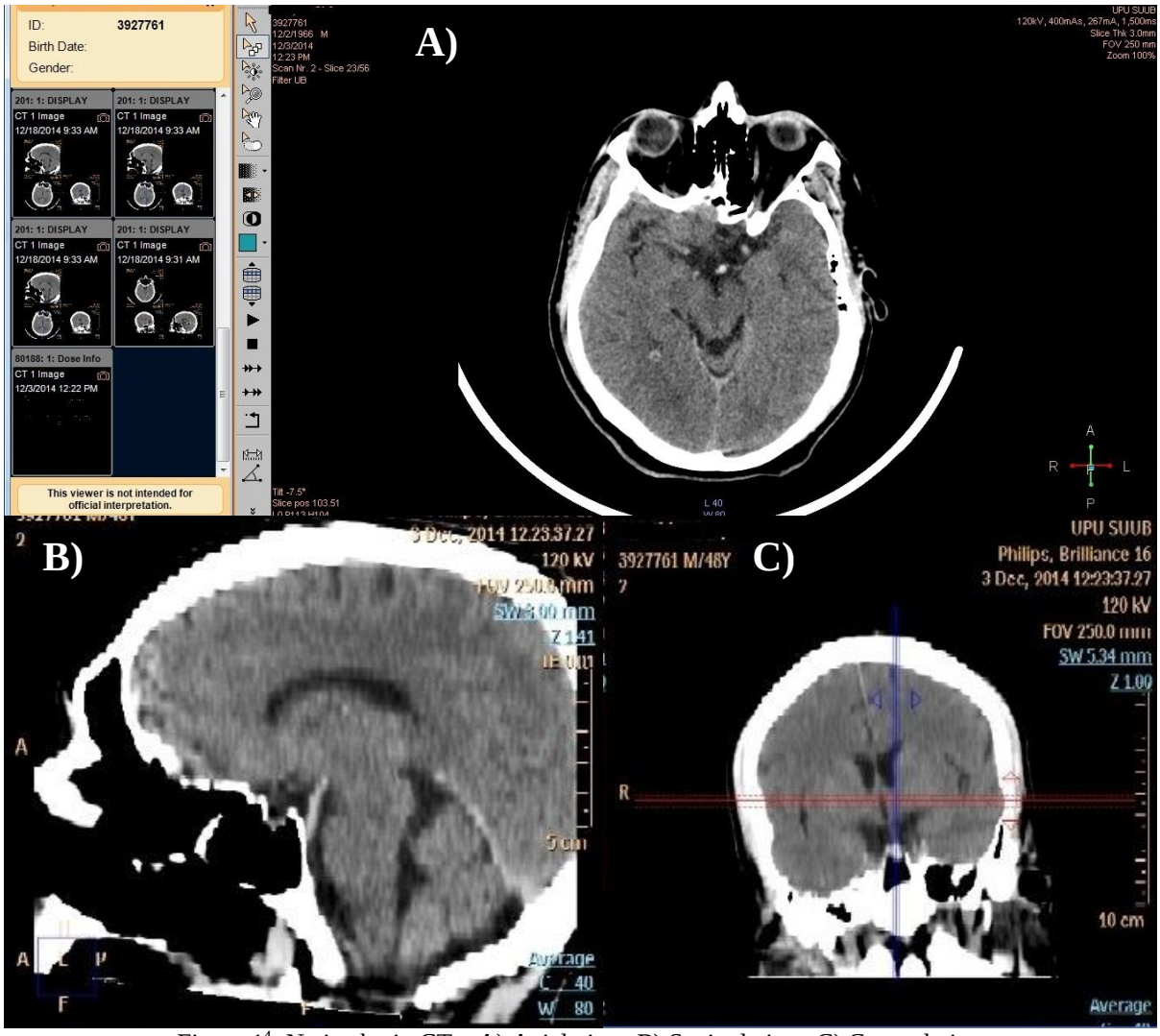

Figure 1[4]: Native brain CT – A) Axial view, B) Sagittal view, C) Coronal view

The National Institutes of Health Stroke Scale score at 12: 30 was 25 points. An emergency native brain CT was performed that did not show any recent endocranial vascular modifications or focal, diffuse infra density or supratentorial abnormalities. The ASPECTS score was 10 points.

Given that the patient did not have contraindications and was in the therapeutic window, at 12:45, the thrombolytic therapy was initiated intravenously with Actilyse 0.9 mg/ kg. During thrombolysis, the blood pressure was maintained in the range of 170 / 70-110 / 50 mmHg. The patient showed no adverse reaction to the administration of Actilyse. Previously, the benefits and risks of therapy with reteplase were explained to the family, which understood, accepted and signed the informed consent.

At the end of thrombolysis, 1:45 p.m., the patient was conscious, cooperative, and slightly drowsy, with discrete dysarthria. He could perform simple and complex orders and

[4] The Computer Tomography images are given courtesy of the Imagistics Department, University Hospital of Emergency Bucharest

he had equal intermediate pupils, without any signs of deficit in the sphere of the cranial nerves. The patient could mobilize all the limbs symmetrically. The Glasgow Coma Scale score was 15 points and the National Institutes of Health Stroke Scale score was 2 points. The procedure took place in the Emergency Room the University Hospital of Emergency Bucharest.

Figure 2[5]: Cerebral angiography – A) Right carotid artery, B) Left carotid artery

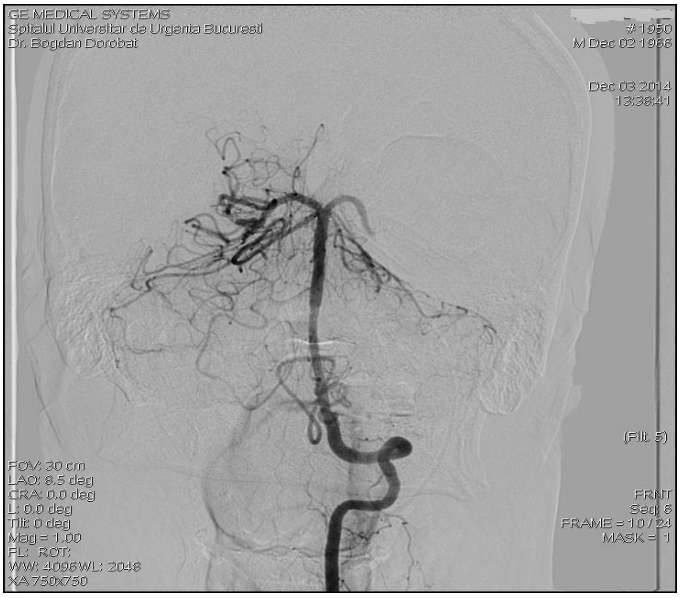

Figure 3[6]: Cerebral angiography – Left vertebral artery with left cerebral posterior artery imputed

[5] The images are given courtesy of the Imagistics Department - Angiograph, University Hospital of Emergency Bucharest

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Subsequently, a "4 vessels" cerebral angiography was undertaken, in order to see a distal thrombus in the left posterior cerebral artery (fig. nr. 2 and fig. nr. 3).
Several investigations were performed:

- Electrocardiogram - sinus rhythm with a heart rate of 100 beats per minute without repolarization alterations;
- Transthoracic cardiac ultrasound - showed no suggestive images of thrombus, un-dilated cavities, predominantly septal left ventricular hypertrophy, left ventricular wall kinetics with normal ejection fraction 70%, without valvulopathy hemodynamically significant, free pericardia;
- Laboratory tests - mixed dyslipidemia without any pathological values;
- Native brain computer tomography at 24 hours after thrombolysis - small hypodense area left occipital cortical-subcortical with ischemic appearance; area with appearance of ischemia in the left thalamus which determines fingerprinting the lateral ventricle of this part - lesions are superficial and deep, situated in the territory of the left posterior cerebral artery, fluid periencefalic spaces with dimensions in the age limits, symmetrical ventricular system on the midline.

During hospitalization, the patient's evolution was favorable. At discharge, the patient shows paresthesia with character of numbness in the right upper limb without focal neurological signs.

CONCLUSION

Despite a bad prognosis, with a high risk of death, the treatment with Alteplase increased the patients‘ odds of a good stroke outcome. With earlier treatment applied he had a full neurological recovery and the chance of living a normal life thereon.

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