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Case report/Kazuistyka

Dynamic course of an intracerebral hemorrhage – case report

Dynamika przebiegu krwotoku śródmózgowego – opis przypadku

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ABSTRACT

The authors present a case report of 72-year-old male patient with intracerebral hemorrhage. The intracerebral hemorrhage episode was preceded by three transient ischemic attacks. The patient also suffered a metabolic seizure within the first few hours of hospitalization, followed by pulmonary embolism, urinary tract infection, hyponatremia and two falls during the rehabilitation. The patient was treated pharmacologically and surgically.

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A 72-year-old male patient was admitted on 4 August 2011 to the Neurological Department at the Institute of Psychiatry and Neurology in Warsaw as he suddenly felt unwell and complained of an acute headache. Following physical exertion, the patient also complained of weakness in his left-sided limbs, numbness of the tongue, tremors and numbness in the left hand and left foot. A week earlier he had also suffered several incidents of weakness and numbness in the left side of his body lasting some minutes. The patient was diagnosed with transient disturbances in cerebral circulation in the course of carotid atherosclerosis. His neurological status at admission to the clinic was characterized by deep paresis and tremor in the patient's left-sided limbs. A CT scan of the brain (Fig. 1) revealed the presence of a fresh hemorrhagic intracerebral outbreak in the right parietal lobe, measuring approximately 41 mm × 30 mm and surrounded by a small area of the hypodense edema, and a trace of fresh blood in the subarachnoid space above the right hemisphere. Within a few hours of admission the patient's paresis had progressed to the paralysis of the left-sided limbs. The patient was diagnosed as having suffered a hemorrhagic stroke of the right hemisphere of the brain in the course of hypertension. The situation was consulted neurosurgically because of the intracerebral edema, with a decision to continue with conservative treatment, using bedside rehabilitation with the patient being occasionally seated in a chair. On 24 August 2011 symptoms of pulmonary embolism were recognized in the CT scan of the chest and the CT pulmonary angiography. The tests revealed the presence of emboli in the pulmonary arteries up to the middle and lower lobes' segments of the right lung, and lower segments and segment 1 and 4 of the left lung. Also increased was the serum levels of D-dimers, which was 6000 ng/ml. The patient's overall condition improved after he was given heparin, and the embolism parameters dropped to D-dimer level = 1260 ng/ml. Because of the lowered sodium levels to 123 mmol/l, the patient was also treated with the saline solution and fludrocortisone acetate, which brought the sodium levels back to normal within a week.

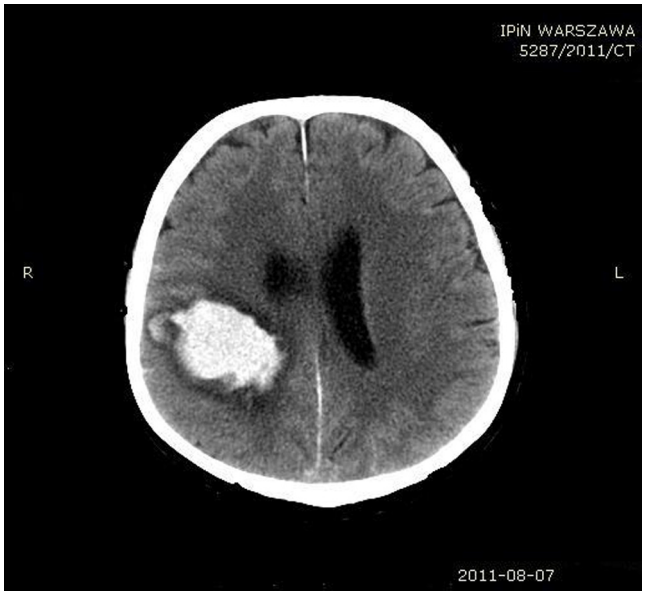

Fig. 1 – A CT scan of the brain revealing the presence of a fresh intacerebral hemorrhage in the right parietal lobe, measuring approximately 41 mm × 30 mm and surrounded by a small area of the hypodense edema, and a trace of fresh blood in the subarachnoid space above the right hemisphere

A CT scan taken on 7 August 2011 showed the enlargement of the intracerebral hemorrhagic outbreak in the right parietal lobe to 59 mm × 32 mm, surrounded by a larger area of edema and the presence of fresh blood in the subarachnoid space above the frontal and parietal lobes of both brain hemispheres, and above the cerebellar tentorium, as well as greater pressure on the right lateral ventricle. A CT scan of 24 August 2011 showed the presence of the hemolysis of the hemorrhagic outburst in the right parietal lobe, pressure on the ventricular system and comparable characteristics of edema in the right hemisphere of the brain.

On 2 September 2011 the patient was transferred to the Neurorehabilitation Ward of IPiN, lying down but in good overall condition, with stable circulation and respiration, little neurological improvement, persistent paralysis of the left-sided limbs, left-sided unilateral neglect, left-sided hemianopia, central paresis of the left facial nerve, a small speech disturbance of the dysarthria type, and distorted finger position in the left hand and toe position of the left foot.

On 9 September 2011 the patient began complaining of intensified headache, had a slight fever and was subsequently diagnosed with a urinary infection, which was treated with ciprofloxacin.

He had a slight fever, infection was found in the urinary tract, and he was treated with ciprofloxacin. A CT scan of the brain taken on the same day showed the presence of severe cerebral edema, with considerable compression of the right lateral and third ventricles and their shifting under the cerebral falx, to the left, by 12 mm with the features of partial absorption of the intracerebral hematoma in the right hemisphere of the brain. The patient was very much slowed down and periodically sleepy, though he woke up when he was spoken to, opened his eyes and responded to simple questions. The presence of central palsy of the left facial nerve was diagnosed, along with left-sided hemianopia, left-sided hemiplegia and left-sided unilateral neglect syndrome. The patient received mannitol and dexamethasone, because of a suspicion that there might be bleeding into the brain tumor. After neurosurgical consultation, the patient was urgently transferred to the IPiN Neurosurgery Department. On 9 September 2011 a right-sided temporal-parietal craniectomy was performed and the intracerebral hematoma removed. Histopathological tests of the collected samples did not detect the presence of neoplastic lesions. The CT scan of the brain of 12 September 2011 showed the presence of a smaller hematoma, 21 mm × 12 mm in size, smaller edema of the right hemisphere of the brain and displacement of midline structures to the left by 6 mm. The control CT scan performed 5 days after the operation showed the presence of an outburst 5 cm in diameter, located in the right parietal region, cystic in nature, with the features of hemolysis of bleeding in its upper part, and a large area of edema with compression of the right lateral ventricle and displacement of the midline structures of the brain to the left by 5 mm; the outburst reinforced on the