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Glomerular filtrate dynamics in patients with acute ischemic stroke

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Objective: to specify the clinical and paraclinical characteristics of the concomitant lesions of the nervous system and the kidneys in patients with acute stroke. Material & amp; Methods. This paper presents the case report of 240 patients, aged 72 ± 6.64 , who suffered from ischemic stroke. The comprehensive examination, including a detailed clinical and neurological check-up (evaluating the patients' condition severity with the NIHSS) on the 1st and 21st day of the disease), laboratory analysis and instrumental examination. Results. In all the patients, we followed up renal function, more specifically, we monitored both urea and creatinine levels in the serum, and the glomerular filtration rate (GFR). It's worth paying attention to an important fact: in the 1st day of the disease, only 5.6 % of patients with right and left hemispheric carotid strokes and 6.92 % of patients with ischemic stroke in the vertebrobasilar system were observed to have normal GFR. No patient with hemispheric carotid stroke had a normal GFR. The vast majority of patients was found to have moderate impairment in the renal filtration-concentration function. The patients with acute brain-stem and cerebellar ischemia were found to have no very severe and end-stage renal dysfunction. The neurological deficit severity was detected to correlate to the GFR in the patients with right hemispheric ischemic stroke, as confirmed by hemispheric asymmetry role in renal filtration functioning. Moreover, our findings showed that the more severe was neurological deficit in patients with right hemispheric ischemic stroke, as confirmed by hemispheric asymmetry role in renal filtration functioning. Moreover, our findings showed that the more severe was neurological deficit in patients with right hemispheric ischemic stroke, the better was the renal concentration-filtration capacity (the higher GFR).

Conclusion:

1. It was found a significant relationship between the renal concentration and the filtration function in patients with ischemic stroke.

2. It was discovered that the right brain was more important for the renal function regulation in patients with acute cerebral ischemia.

Biography

Kononets Oksana, Associate Professor, MD, PhD, Department of Neurology No. 2, Shupyk National Healthcare University of Ukraine, 9 Dorohozhytska Str., Kyiv, 04112 Ukraine. At the Department of Neurology No. 2 the investigations concerning the nervous system state under somatic pathology, in particular the kidneys, are under way. The investigations concerning the nervous system state in renal pathology in patients with different neurological diseases, in particular, have been carried out by PhD in Medicine, Associate Professor Oksana Kononets.

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