

INTERNAL MEDICINE SECTION

OVERCOMING STROKE - AN EARLY NEUROLOGICAL MANIFESTATION IN PATIENTS WITH INTERNAL CAROTID ARTERY STENOSIS

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Introduction: According to the World Health Organization, about 15 million people suffer stroke worldwide each year. Of these, up to 87%, are ischemic strokes. Internal carotid artery (ICA) stenosis is one of the most important risk factor, producing 30% of all ischemic strokes. Estimates indicate that 5 per 1,000 persons aged 50-60 years and approximately 10% of persons older than 80 years have carotid stenosis greater than 50%. We consider it an important aspect, which will help better understand the mechanism of stroke.

Purpose: To find out the most common neurological manifestations, in patients with internal carotid artery stenosis, who had an ischemic stroke.

To elaborate a plan of prevention and diminish the number of visits to doctors, due to early neurological manifestations predicting an ischemic stroke, or its relapse;

- To determine major risk factors leading to those manifestations;
- To detect the features of early neurological manifestations in patients with different degree of internal carotid artery stenosis;

Material and methods: 100 patients who had an ischemic stroke (50 patients with internal carotid artery (ICA) stenosis, and 50 in the control group, without ICA stenosis);

The comparative analysis of case histories, neurological manifestations, CT scans, clinical and imaging investigations, together with statistic analysis has been performed.

Results: We found that 88% of patients with a critical ICA stenosis and ICA occlusion, had smaller ischemic areas on CT than patients in the control group and patients with smaller ICA stenosis; 71,5% of them also had longer – lasting and more numerous clinical manifestations than patients in the control group. We have also compared their „border” cerebral tissue resistance to ischemia, documented by the presence of “Watershed” phenomenon (an area of necrosis in the brain caused by an insufficiency of blood where the distribution of cerebral arteries overlap, in which the most distant areas may not receive blood supply, if there is a fall in circulation) in 36% of patients with ICA stenosis, and 26% in patients in the control group. The analysis of the type of plaque, the role of risk factors, the influence of coagulation factors, and patients’ rehabilitation performances, has also been included in this study.

Conclusions: We have demonstrated clinically, that patients with ICA stenosis, have more prolonged and numerous clinical manifestations than patients in the control group, they manifest better imaging results, and a more frequent “border” necrosis, which can give us premises to help overcome ischemic stroke and its consequences.

Keywords: stroke, stenosis, carotid.