Introduction

The evolution degree of memory, attention, intelligence forms person individuality, determines professional work success, fixes an individual social status. Decline of the cognitive functions is one of the modern medicine actual problem. Emerging disorders lead to living standards descending, badly affect social and professional activity of a person. The influence of hypertension as modifiable risk factor in the evolution of cognitive impairment is emphasized in numerous investigations. Negative effects of hypertension on cognitive disorders progressing were described in epidemiological studies, such as the Systolic Hypertension in Europe trials, PROGRESS, LIFE, SCOPE, MOSES. The correlation between systolic and diastolic blood pressure levels and evolution of cognitive impairment in old patients were also analyzed by Rotterdam and Göteborgskom studies. Almost all the proposed in research literature data were obtained from the investigation of old patients group, who had high indexes of blood pressure and stroke histories. Therefore we think that it is very impotent to detect the slight and moderate cognitive impairment of hypertensive patients of working age until the expressed clinical signs appear.

Objective

To determine the age and hypertension duration influence on the evolution of cognitive impairments in patients with essential hypertension of the second stage.

Materials and methods

There were examined 102 patients with essential hypertension of the second stage, which had not any attendant illnesses. Their average years were about 49,84±0,83 average. Disease duration was approximately 8,78±0,60. Arterial hypertension of the second degree was detected in 41 (40,2%) patients, hypertension of the third degree was detected in 61 (59,8%) patients. All patients did not get regular antihypertensive therapy and did not reach target blood pressure levels. Essential hypertension Diagnosis was established according to the recommendations of the European Society of Cardiology (2013).

According to the purpose of examination all patients were divided by age and disease duration into 3 groups. Status of cognitive function was examined by memory self-appraisal questioning McNair and Montreal Cognitive Assessment Scale (MoCA test). By MoCA test the following cognitive function components were estimated: attention and concentration,
performing functions, memory, speech, spatial-optical activity, conceptual thinking, counting, and an ability to focus. Test result were determined by summing the scores of the items. The maximum number of points was 30; the standard is 26 and more, the cognitive impairment was fixed at indicators less than 26 points.

To study the psycho-emotional sphere indexes of hypertensive patients we used the series of neuropsychological tests. Statistical data processing of the study was carried out by the computer program "IBM SPSS Statistics 22".

**Results**

Indicators of daily average systolic and diastolic blood pressure, body mass index patients illness duration in different age groups were compared. Analysis of data results by Beck scale showed that examined patients had light depression level which does not actually differ from age and disease duration. Average indexes of reactive anxiety according to three age groups patients and to the groups with different disease duration may be related to mild level of anxiety.

Analyzing the MoCA test data of examined patients it should be noted a tendency to decreasing of cognitive function indexes with age increasing. Thus, the patients of the first group have no cognitive impairment. The cognitive impairment of the second group patients have doubtful lowering up to 3,2% compared with the indicators of the first group patients. But authentic lowering of MoCA test results may be noted in the patients group of 56 years and higher, up to 6,1 % in comparison with the patients under 45 years.

During the patients examination by memory self-appraisal questioning (McNair) more significantly high indexes were received in the group with patients of 46 to 55 years and in the group with patients’ age higher than 56, in comparison with the patients of the age group up to 45 years in 39,2% and in 44,9% accordantly. In the patients group with arterial hypertension to 5 years of duration, cognitive decline was absent.

The indexes of MoCA test in the group of patients with arterial hypertension duration more than 10 years were authentically lower comparing with the group of patients with disease duration up to 5 years and patients with arterial hypertension duration of 5 to 10 years in 9,9% and in 4,9% accordantly.

The indexes of MoCA test in the group of patients with arterial hypertension duration
from 5 to 10 years were actually lower than in the group of patients, with the same disease duration, up to 5 years, in 5.1%.

**Conclusions**

The cognitive decline was defined in the patients with arterial hypertension of the second stage disease.

Moreover a significant increasing of cognitive impairment was observed in patients alongside with duration rising of the arterial hypertension and of age rising.

That it why the early disease stage diagnosing of cognitive impairment is the measure of prevention of dementia in future and it must be an inseparable part of system examination of hypertensive patients.