**Summary.** The influence of combined drug Cytoflavin and Mexicor on the recovery of cognitive functions (CF) was studied in geriatric patients after emergency abdominal surgery under general anesthesia on the basis of thiopental sodium. The aim of the study was to assess the effectiveness of cerebroresuscitation by cytoflavin and meksicor in geriatric patients after emergency abdominal operations. **Methods.** It is included 62 geriatric patients with emergency surgical pathology of the abdominal cavity. We studied the state of the CF by neuropsychological tests: Mini-Mental State Examination (MMSE), Frontal Assessment Battery (FAB), Shulte’s tables test (STT). We also evaluated the correlation of test results with the duration of the operation. Patients were divided into 2 groups. Patients of the 1\textsuperscript{st} group (n=26) were treated after surgery according to the standard protocol of intensive care. Patients of the 2\textsuperscript{nd} group (n = 36), in addition, were treated with cytoflavin and meksicor by the special scheme. The study was performed before the operation, at 1\textsuperscript{st}, 5\textsuperscript{th}, 12\textsuperscript{th} and 30\textsuperscript{th} day after operation. **Results.** Before operation input cognitive dysfunction was observed. After the operation the strength of cognitive dysfunction in the 1\textsuperscript{st} group was the greater, the longer operation. This dependence remained until the 30\textsuperscript{th} day, although it gradually decreased. The results of the MMSE to the 30\textsuperscript{th} day has not reached the initial level, the results FAB and STT recovered only to 30\textsuperscript{th} day. In patients of 2\textsuperscript{nd} group the results of the tests depended on the duration of the operation only in 1\textsuperscript{st} day. The test results have returned to the initial level to 5\textsuperscript{th} day, after that they exceeded it. **Conclusions.** After emergency abdominal operations under general anesthesia on the basis of thiopental sodium in geriatric patients CF recover faster and even become better when cytoflavin and meksicor is used.

**Key words:** postoperative cognitive dysfunction, geriatric patients, cytoflavin, meksicor, emergency abdominal surgery, general anesthesia, thiopental sodium, neuropsychological testing.