Keywords: anesthesia, cardiovascular disease, endothelium, cytokines

Introduction. The rapid development of medicine leads to increased life expectancy, leading to the growing number of elderly. The increase in the number of elderly is a serious problem for both the surgery and Anaesthesiology. Of deaths due to cardiovascular causes during major noncardiac operations up 0.5-1.5%, and any cardiac complications - 2-3.5% (Poldermans D., Bax J.J. 2009). Much attention has been given to study the role of vascular endothelial (Luscher T.F., 1997; Celermajer D.S., 1997; Zateyschykov DA, 1998; M. Remzi Onder, 2006) and inflammation (EL Nasonov, 2002; Bratus VV, VA Shumakov, 2004) as etiopathogenetical main factors of this disease. Definition of endothelial function and new highly inflammatory markers to evaluate the activity of atherosclerotic process flow and provide the basis for this category of patients at high risk of complications. Unfortunately there is little information dedicated to the analysis of markers of systemic inflammation in patients with coronary heart disease in terms of perioperative complications in noncardiac surgery.

The aim was to study and evaluate the functional state of the endothelium and dynamics of proinflammatory interleukin-6 in elderly patients with concomitant cardiovascular pathology in pre- and postoperative period

Material and methods.

The study involved 55 patients aged 60 to 82 years old for elective surgery on the abdominal organs. Patients were representative on basic demographics. Preoperative preparation elderly with cardiovascular disorders carried out according to the recommendations ESC Guidelines (2014) for pre-operative cardiac risk assessment and perioperative cardiac management in non-cardiac surgery. Laboratory studies with the definition of endothelin-1 and IL-6 in EDTA-plasma using enzyme immunoassay (set Biomedica and "Elisa Diameb" (France) held at the "Diagnostic Center Medical Academy." The study was conducted in compliance with the ethics committee. Statistical analysis of the results was performed using the software package MS Excel 2007. data are presented as m ± m. was considered statistically significant value of p <0,05.

Results.

We have compared the levels of endothelin-1 in elderly in pre- and postoperative 1 day after surgery and 5 days. In the preoperative period, levels of endothelin - 1 in all patients was significantly increased by 45% compared with reference values (values of endothelin-1 in plasma obtained during examination of healthy persons according to the literature, were 0.1-0.35 fmol / ml ). At 1 day after surgery marker levels, increased significantly compared with preoperative values. By the fifth day postoperative levels of endothelin - 1 in the study group was significantly reduced to preoperative baseline, but did not reach the reference values.
In the study of interleukin 6 in the preoperative period, its level in all patients exceeded the reference value of 2 times. At 1 day after surgery marker level increased compared with preoperative values up to 10 times. By the fifth time of positive dynamics in the form of reduction of interleukin -6 almost 3.5 times compared to the early postoperative period, but did not reach values to surgery.

Conclusions:
1. In elderly patients with concomitant cardiovascular pathology, which will be held noncardiac surgery revealed a significant increase in levels of endothelin-1 and proinflammatory interleukin-6 in plasma, indicating the presence of endothelial dysfunction and activation of inflammatory system.

2. In the early postoperative vascular endothelium responds release vasoconstrictor and proinflammatory markers on operational trauma.

3. The fifth postoperative days with signs of inflammation and endothelial dysfunction in elderly patients decreased but not disappeared completely.

4. To clarify the mechanisms of influence and effects of existing endothelial dysfunction and inflammatory further research.