Introduction:
The abdominal aortic aneurysm (AAA) surgery is a complex procedure in elderly patients with high cardiovascular risk. Anesthesiological techniques should play special attention to the volume status during cross-clamping as well as to the blood loss. Goal directed fluid therapies (GDT) in AAA surgery in elderly patients decrease the perioperative morbidity and mortality (1).

Aim of this study is to investigate administration of fluid-based on either a GDT approach or a control method (fluid administered based on static preload parameters and traditional hemodynamic) in all phases of AAA surgery and especially in the phase of clamping and de-clamping.

Methods:
A total of 30 patients ASA III, randomly scheduled for elective, open AAA surgery were included in this clinical trial. They were randomly assigned to two groups I – GDT with targeting stroke volume variation (SVV) and II - Control group where fluids were administered at the discretion of the attending anaesthesiologist. In both these groups haemodynamic parameters, central venous pressure (CVP), temperature, blood loss and diuresis were registered during the operation and 48 hours postoperatively. Each group was assessed for postoperative complications.

Results:
GDT group received less fluids and had a higher cardiac index (CI) (3.9± 0.6 vs. 2.9± 0.8 l/minute per m², p < 0.01) and stroke volume index (55.1 ± 5.4 vs. 35.1 ± 5.8 ml/m², p < 0.01) than the control group. There were significantly fewer complications in the intervention than control group (3 vs. 9, p = 0.02).

Conclusion:
GDT fluid administration enables less use of fluids, improved hemodynamic and fewer postoperative complications in elderly patients undergoing AAA surgery.

References: