

REVIEW

For the dissertation work of Viktor Zemlyanskiy on the topic: "Solution of the problem of retrograde endoleaks after endovascular prosthetics of abdominal aortic aneurysms" submitted for the degree of Doctor of Philosophy (PhD) in the specialty: 8D10102 "Medicine"

Endovascular reconstruction (EVAR) of abdominal aortic aneurysms is a unique surgical intervention, representing a relatively new direction in the treatment of aortic aneurysms. In some cases, the use of this method of treatment instead of traditional "open" operations on the aorta is absolutely justified by the result, which allows preventing aneurysm rupture with the least risk. Reconstructive "open" operations for aneurysms of the infrarenal aorta are still accompanied by a high number of complications and deaths, especially in patients with high surgical risk.

It is generally accepted that patients with abdominal aortic aneurysm belong to the group of severe patients requiring immediate consideration of the possibility of prosthetics. According to modern research, EVAR is the method of choice for the surgical treatment of this formidable disease.

At present, the Republic of Kazakhstan has accumulated quite a lot of experience in performing such interventions. In the course of evaluating the long-term results of endovascular prosthetics, carried out as part of a number of scientific works, it was found that the most common complication that worsens the results of endovascular treatment of aneurysms is the development of the so-called. endoleaks into the cavity of the aneurysmal sac after its isolation.

Preservation of active blood flow in the lumen of the aneurysm provokes an increase in its linear dimensions and maintains the risk of its rupture. Repeated endovascular interventions aimed at eliminating endoleaks after implantation of a stent graft are associated with significant technical difficulties and difficulty in accessing the adductor arteries.

The methods of preventive embolization used today using metal coils and endovascular occluders show a high incidence of retrograde endoleaks and the development of high intermittent claudication (5.53% and 29.5%, respectively). This fact determines the relevance and necessity of developing new methods of preventive embolization of the internal iliac arteries in the prevention of retrograde endoleaks and ischemic complications after endovascular repair of abdominal aortic aneurysms. The topic studied in the course of the dissertation work is timely and relevant due to the increase in the number of minimally invasive endovascular operations for aortic aneurysms and the accumulation of certain experience in performing these interventions. In the course of the study, a new original method for intraoperative embolization of the internal iliac arteries using liquid embolizing systems was developed and implemented; the effectiveness of the proposed method in preventing the development of retrograde endoleak, improving the results of treatment of patients after endovascular replacement of abdominal aortic aneurysms involving the common iliac arteries was proved.

The practical application of the developed original method of intraoperative embolization of the internal iliac arteries in order to prevent retrograde endoleak and post-embolization syndrome after endovascular repair of abdominal aortic aneurysms made it possible to reduce the number of staged interventions in patients who underwent endovascular repair of abdominal aortic aneurysms. This causes a

decrease in the number of postoperative complications in the form of retrograde endoleaks and post-embolization syndrome and an improvement in the results of endovascular replacement of abdominal aortic aneurysms involving the common iliac arteries.

A comparative analysis of the results of using the original method of embolization of the internal iliac arteries using liquid embolizing systems demonstrated a decrease in the relative risk by 5.3 times or by 84%. $RR=0.189$ (95% CI: 0.046-0.773), $p=0.02$. The NNT for development of type II endoleaks and/or post-embolization syndrome during the first year was 3.137 (95% CI: 1.898-9.043). This means that approximately every fourth patient will be able to prevent the development of these complications when using the proposed method.

The tasks solved in the course of the work correspond to the goals and the conclusions obtained, they are formulated completely and correctly.

There are no comments on the dissertation. The dissertation work is recommended for public defense.

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