Is it possible to train an endovascular surgeon?

Eduardo Keller Saadi*

Treatment of aortic diseases has always been the object of studies in our specialty.

In 1991, Parodi et al. performed the first implantation of an endoprosthesis in the world to treat an abdominal aortic aneurysm [1].

Recent advances in endovascular techniques, as an alternative to conventional surgery, in the treatment of aneurysms and dissections of the aorta and its branches created a new specialization, denominated by the Brazilian Medical Association as Endovascular Surgery.

The Brazilian Society of Cardiovascular Surgery (BSCVS) is dedicated to a comprehensive preparation of surgeons in all procedures related to cardiovascular surgery with specific training in endovascular procedures included in the medical residence and the Endovascular Surgery Division (DECEN) of the society putting together guidelines, providing training and running continuous education courses [2].

When new procedures are introduced, the pressure to rapid implement them can cause changes in the fundamental principles of medical education, with a risk of compromising the quality and safety of treatment provided to patients [3-5].

For a professional to be ready to perform aortic endovascular procedures, he must:

1. profoundly understand the disease;
2. treat the disease with established techniques;
3. develop technical abilities;
4. take care of patients in the postoperative period; and
5. be capable of treating complications.

As in any other procedure, the technical qualification starts with a theoretical foundation. Firstly, it is necessary to understand the disease, the natural history, the physiopathology, diagnostic imaging methods, as well as the criteria to indicate surgery [6,7]. Nowadays, simply performing tasks discussed and planned by others is not acceptable.

The experience and knowledge of other well-established techniques used to treat aortic diseases are important for operators as this will help them to choose the best therapeutic method, reducing biases in indications. In more and more cases, hybrid procedures are gaining space and only surgeons who dominate open chest techniques and cardiopulmonary bypass, as well as endovascular surgery, will be prepared to perform them with safety.

The question about the development of technical abilities to perform the procedure is only a part of the problem. It is clear that, apart from attaining all this theoretical knowledge, the surgeon must develop his own technique with absolute rigidity and determination. Training to access inguinal and retroperitoneal vessels, as well as the management of catheters and guides, must be part of the medical residency program.

A close relationship with the patient in the postoperative period is as important as before and during the procedure. The surgeon must be able to support his own opinions in the different recovery phases, from the immediate to the late phases, in which life-long periodical follow-ups are essential to avoid and treat possible complications, thereby preventing death. An apprenticeship is impossible without a systematic follow-up of patients in order to verify the medium- and long-term outcomes.

Who performs endovascular procedures must be sufficiently prepared to take care of potential complications. Patients who suffer from ruptures or dissections of the arteries must be urgently operated on by professionals who dominate both techniques. Peripheral embolizations require embolectomy, and occluded arterial branches need immediate coronary artery bypass grafting.

Indeed, before being an endovascular surgeon, it is necessary to be a surgeon and, even before this, it is necessary to be medical doctor by vocation.

With all this available knowledge, the so-called endovascular surgeon will only be successful if he profoundly understands the disease and is directly involved with the patient.

Many, even without understanding the

complications, can be technically trained. But, without involvement with the patient, they can only be good operators with abilities and good motor coordination to manage catheters, capable of adequately performing the tasks that could be learnt in a technical school.

Young surgeons must start training under safe and active supervision of competent specialists to avoid unnecessary risks for patients.

Who has the responsibility to train people, must always be concerned with the quality of their work, preserving the safety of patients.

Excellence in endovascular treatment is not reached only with the initial training and with clinical experience, but with continuous education programs and, in this, the BSCVS is playing a fundamental role, which must be extended and improved, mainly due to the great involvement of several cardiovascular surgery groups in this area and of scientific contributions published at national and international levels [2,8-12].

***President of Professional Defence Committee of Brazilian Society of Cardiovascular Surgery**

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