special interest because of the potential for intervention. Although apoptosis is believed to play a part in cerebral injury, its role has generally been identified through histologic techniques. These snapshots do not permit a clear delineation of the timeline of apoptosis. Because the role of apoptosis is not clear, therapies have yet to be designed for the specific purpose of inhibiting apoptosis.

There are still many gaps in our knowledge about how to best study cerebral outcome. Investigations require coordinated efforts by multiple groups, pursuing systematic, multilevel research, spanning from cell cultures, to various animal models, and ultimately to clinical trials.

Elizabeth O. Johnson, PhD^a

Olga Ananiadou, MD^b

Department of Anatomy, Histology, and Embryology^a

Department of Cardiovascular Surgery^b

University of Ioannina, School of Medicine
Ioannina, Greece

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Interventional techniques in cardiovascular surgery

To the Editor:

We appreciate the thoughtful editorial written by Dr Mitchell¹ concerning our brief report.²

Aortic stenting is a new procedure. We agree that any problems with this technology should be discussed openly, as we tried to do in our report. Likewise, Dr Mitchell's comments add to a vivid exchange of opinions.

Please allow us to answer the questions posed in his first paragraph at the beginning: The left carotid was accidentally overstented for 2 mm, as said in the text, and obviously it was an open web design; otherwise placement of a stent in this position would have resulted in almost complete overstenting of the left carotid artery. The length of the neck is always a crucial issue; we considered it to be longer than 2 cm both at the lesser and the greater curvatures.

These technical details may be an important, but secondary, issue. However, we doubt whether conventional open surgery is still the method of choice in many elective operations on the descending aorta. The sentence "In my opinion stent grafting should be viewed as an additional surgical strategy rather than an alternative one" brilliantly describes the attitude surgeons should have toward this new technology. In contrast with the reactions to coronary stenting decades ago that were characterized by rejection and opposition, we should eagerly learn to adopt the interventional techniques to expand the traditional surgical armamentarium for the best of our patients. In our center, the decision for aortic stent grafting is exclusively made by 3 cardiovascular surgeons with extensive experience in open aortic procedures. We believed stent grafting to be superior in this special case because of the significant calcifications of the aortic wall, which may be visible in Figure 1,^a 1. Meanwhile, we changed our policy in comparable cases to one that may combine the advantages of open surgery and stent grafting while avoiding the majority of drawbacks of

both methods. In several similar cases in the last months, we implanted stent grafts through an open approach via the aortic arch. This procedure allows perfect control of the supraaortic vessels and secure fixation of the graft inside the arch by sutures, thus avoiding endoleaks and migration. The cumbersome distal aortic anastomosis is omitted, minimizing the operation time and risks of spinal ischemia and bleeding. Correct expansion of the graft and aortic pathology at the distal end of the stent are assessed by intraluminal endoscopy. Short circulatory arrest with antegrade cerebral perfusion required for this operation was well tolerated by all patients.

This may be just one example how methods developed by interventionalists may help surgeons make a hazardous procedure a simple one. Others, most probably in the field of interventional treatment of valve disease, will follow. We strongly believe that surgeons should face the progress of interventional technology critically, but with an open mind, and try to extract the best of these methods.

Robert Bauernschmitt, MD, PhD

Bernhard Voss, MD

Rüdiger Lange, MD, PhD

Department of Cardiovascular Surgery

German Heart Center Munich

Munich, Germany

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