Meeting the Thoracic Challenge?

The treatment of aortic disease and injury has always posed a significant challenge to vascular specialists and hospital staffs. The various states and presentations of thoracic pathologies in particular are unique, unpredictable, multivariate, and always quite serious. However, despite our long history of battling thoracic aortic disease, we have still not found the perfect means of treating it in all instances—not by a long shot. Endovascular repair of descending thoracic aortic aneurysms, currently the only approved use of endografts in the thoracic anatomy, has come a long way in improving the care of these specific patients. And, although currently off-label in many countries, physicians are increasingly utilizing endovascular techniques, modified endografts, and hybrid procedures in a variety of settings, including arch aneurysms, acute and chronic dissections, trauma, and rupture. Many clinical trials, such as those targeting acute aortic dissection, are underway, and we eagerly await those data. In addition, new devices such as branched thoracic endografts and percutaneous devices are being developed.

As many of you may know, after spending 12 years at Montefiore Medical Center in New York, I decided to return to my mother country, Japan, in July 2006. At that time, the division of vascular surgery at Jikei University was treating five or six aortic aneurysms per year. Among the 32 divisions within Jikei University, the division of vascular surgery had the lowest revenue. The first AAA endograft was approved in Japan 2 weeks after my return, and the first TAA endograft was approved just last year. In that regard, my return to Japan was very timely, and as a result of having both endograft types available along with my endovascular experience, our division is now treating more than 400 aortic aneurysms per year, as well as 400 arterial cases, and has the highest revenue among all divisions. This remarkable growth was not possible simply by the power of my charm. It proves the power, attractiveness, and clinical value of EVAR and TEVAR.

With all of the above in mind, in this issue of *Endovascular Today*, we have asked group of aortic interventional experts to share lessons they have learned from difficult cases and their experiences using new techniques. W. Anthony Lee, MD, opens our feature, describing how partial right atrial inflow occlusion can be a useful technique for assisting with endograft deployment during TEVAR. This article also includes a commentary by Manish Mehta, MD, MPH, who provides his recommendations regarding this technique.

Next, Grace J. Wang, MD, and Edward Y. Woo, MD, offer two case studies that demonstrate how the snorkel procedure can be used preventatively or as a bailout technique to ensure left carotid artery patency during TEVAR. In a case made more difficult because of challenging anatomy, Ross Milner, MD, and Edward P. Chen, MD, explain how a collaboration of open and endovascular techniques may be the best method for repairing certain thoracic aneurysms.

Rodney A. White, MD, et al then present a case using endograft exclusion for an acute descending thoracic aortic dissection to achieve reperfusion of vital organs. This article also describes the importance of IVUS in determining the path of the true lumen to ensure accurate device deployment. Frank R. Arko, MD, et al detail how they were able to repair a dangerous type B aortic dissection using IVUS guidance to provide accurate placement of embolization coils. Benjamin W. Starnes, MD, FACS, and Gabriel Aldea, MD, FACS, present a blunt aortic injury case and the methods used to treat this life-threatening presentation endovascularly. We close our feature with an interview with Dr. Woo, who discusses a commendable study that aims to explore and highlight the differences between rupture and malperfusion in regard to presentation and treatment strategies of type B dissection.

Thoracic aortic intervention is a challenging yet promising endeavor. As the Japanese saying, "A wise man learns from history while a fool learns from his own experience," teaches us, it is imperative that we share our experiences as often as possible. We are grateful to our authors for having presented these cases, and we hope you have found them not only valuable but also stimulating. ■

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Chief Medical Editor