



Endovascular and surgical interventions in the end-stage renal disease population

Patients with end-stage renal disease require renal replacement therapy, which is most frequently performed via hemodialysis. To perform hemodialysis, a dialysis catheter or arteriovenous fistula or graft is needed as a means of vascular access. Once this initial surgical vascular access has been created, access maintenance can be performed using endovascular techniques. This special series encompasses a comprehensive multidisciplinary overview of advancements in these endovascular and surgical interventions in the end-stage renal disease population. It also sheds light on evolving technologies, such as endovascular arteriovenous fistula creation and the current evidence for the use of drug-coated balloons in vascular access maintenance.

In their paper, Walker and Gadegebeku (1) emphasize the urgency of addressing health disparities in the end-stage renal disease population based on national guidelines. Richarz and colleagues (2) describe the preoperative imaging workup for vascular access creation and propose the use of advanced modalities as problem-solving tools for specific clinical questions. The paper by Ruff *et al.* (3) addresses the medical and endovascular management of atherosclerotic disease in the end-stage renal disease population. Montelongo and colleagues (4) outline various surgical creation techniques for upper extremity vascular access, whereas Alnahhal, Williams, and Kirksey (5) focus on surgical creation of lower extremity vascular access in patients with supradiaphragmatic central venous occlusion. Alnahhal, Rowse, and Kirksey (6) address the best approach for obtaining vascular access in clinical challenging cases. A paper by Li *et al.* (7) provides an overview of the novel technique of endovascular arteriovenous fistula creation in selected patients with suitable vascular anatomy. Saati and colleagues (8) discuss the role of duplex ultrasound in noninvasive vascular access surveillance. In their paper, Gonzalez *et al.* (9) focus on multimodality imaging of arteriovenous fistula and grafts in patients with end-stage renal disease. DePietro and Terrotola discuss the role of plain balloon angioplasty (10) and drug-coated balloon angioplasty (11) for vascular access maintenance in the end-stage renal disease population. In his paper, McLennan (12) describes stenting approaches for dialysis access maintenance. Wu, Kalva, and Cui (13) describe thrombectomy techniques used for the endovascular treatment of thrombosed vascular access, as well as the potential complications of these methods. A paper by Sharma *et al.* (14) discusses the role of tunneled dialysis catheters in the initiation of hemodialysis, including an overview of atypical infradiaphragmatic access site options for catheter placement. Two articles in this series address the challenge of central venous stenotic and occlusive disease in patients with chronic kidney disease. First, a paper by Alnahhal, Rowse, and Kirksey (15) provides an overview of management options for central venous disease. Second, an article by Rashwan and colleagues (16) describes endovascular recanalization techniques for central venous occlusion. Finally, a paper by Johnston, Jin, and Morris (17) discusses peritoneal dialysis catheter placement techniques as an alternative to hemodialysis for renal replacement therapy in the end-stage renal disease population.

This special series entails a collection of high-quality manuscripts dealing with endovascular and surgical management in the end-stage renal disease population. We are certain that the readers of *Cardiovascular Diagnosis and Therapy* will be equally excited about the special series as we were while editing and preparing this nice collection of articles.

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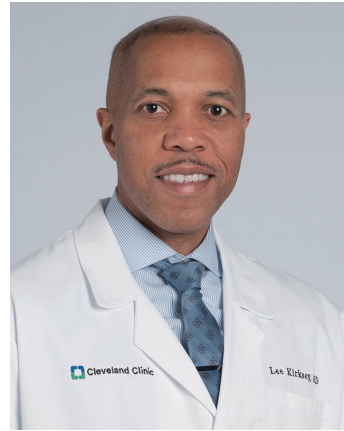
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