

# Strategies for Intraoperative and Postoperative Management of Multiple Endoleaks During Complex Aortic Endovascular Repair of Complex Aortic Aneurysms

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## PURPOSE

- Discuss the strategies used both intraoperatively and postoperatively during a repair of a complex aortic aneurysm in a high-risk patient.

## MATERIALS AND METHODS

- 78-year-old male with asymptomatic infrarenal abdominal aortic aneurysm (AAA) and bilateral common iliac artery aneurysms (CIAA)
- CTA: 6.3 cm AAA, short infrarenal neck (<10mm), 5.5 cm left CIAA & 1.9 cm right CIAA
- Anatomy was not suitable for an iliac branched endovascular device
- Patient was not an open surgical candidate due to poor cardiac status.

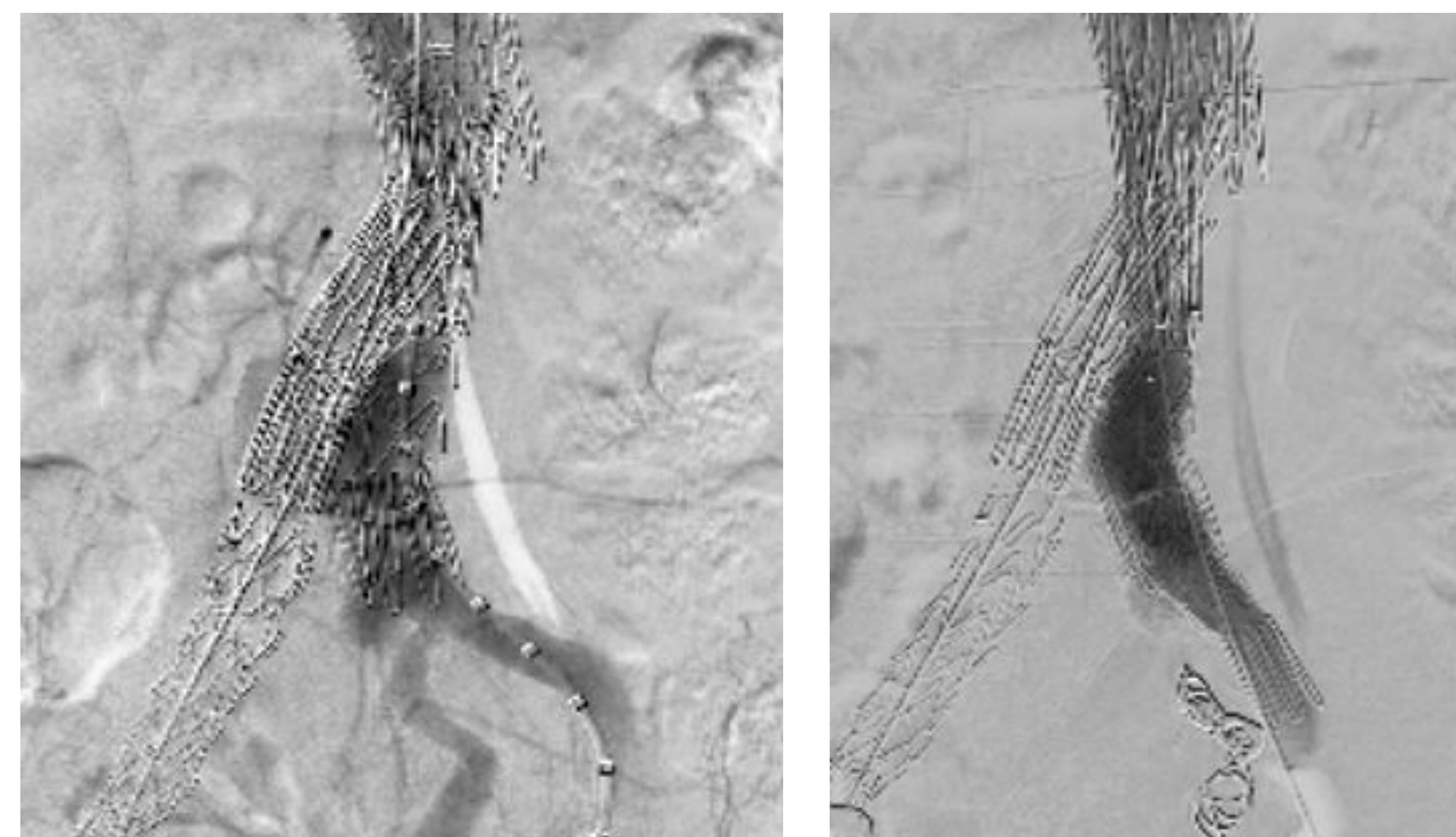


## MATERIALS AND METHODS

- Staged endovascular repair
  - Coil embolization of the right hypogastric artery
  - Fenestrated endovascular aneurysm repair (FEVAR)

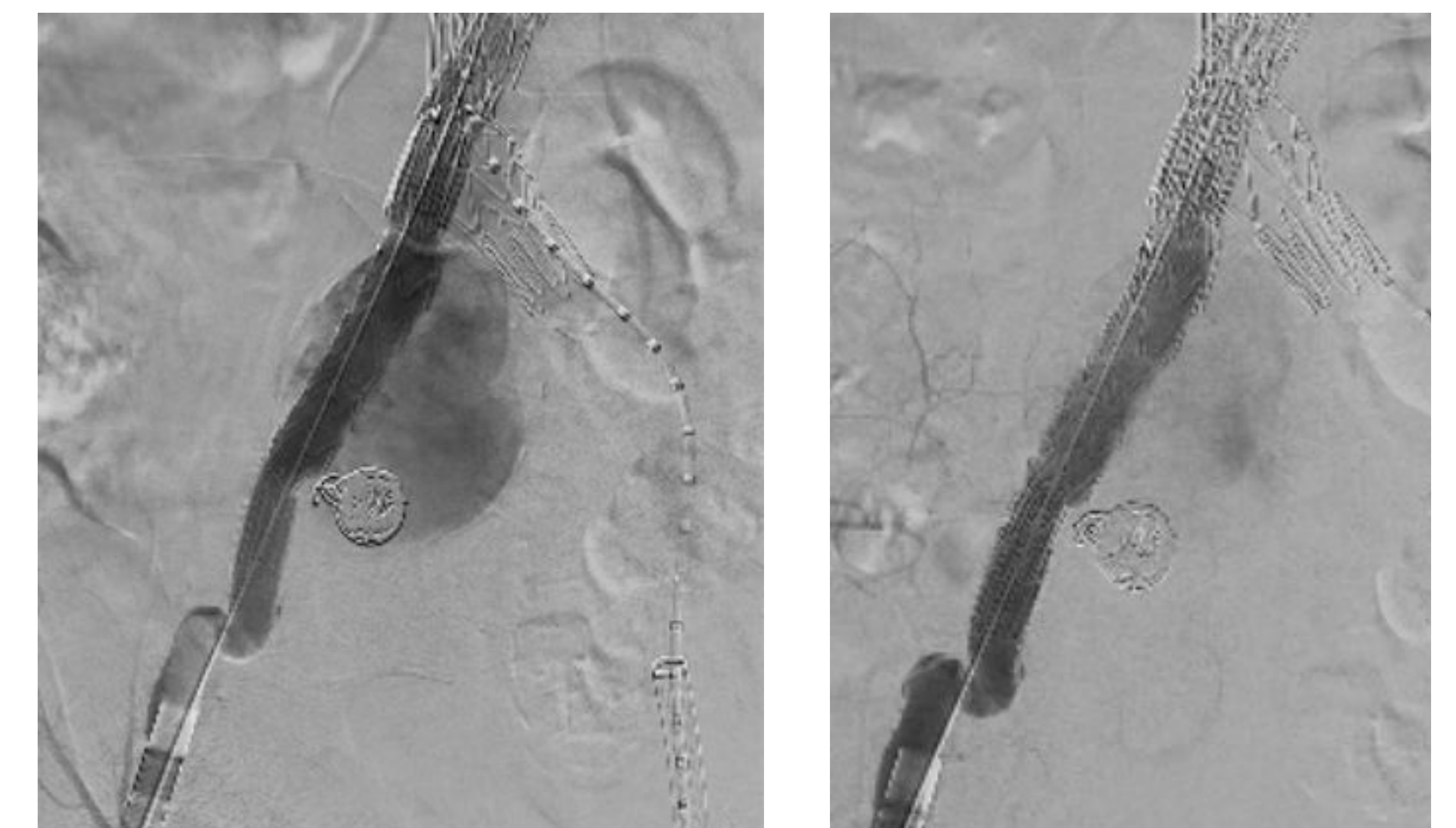
## RESULTS

- Operative course
  - Type Ia endoleak on completion angiogram
    - Resolved with balloon angioplasty proximally
  - Type Ib endoleak with concomitant small pseudoaneurysm on retrograde left sheath angiogram
    - Coil embolization of left hypogastric artery and limb extension



## RESULTS

- Rapid filling of the right CIAA concerning for a type III endoleak on retrograde sheath angiography
  - No improvement after the right limb was ballooned
  - Persistent filling after relining of the entire limb



- No endoleaks identified on postoperative CTA at one month.
- At follow-up, the patient reported postoperative buttock claudication, which resolved over time.

## CONCLUSION

- Complex aortic and iliac artery aneurysms, in patients who are not open candidates, require detailed preoperative planning, advanced imaging, and customized endovascular solutions.
- It is crucial to recognize when the procedure has reached a satisfactory conclusion and to understand that some complications may resolve on their own with time.