

# A novel modified EVAR stent graft technique to seal off a perforation occurring during TEVAR

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## ABSTRACT

**Introduction:** Thoracic endovascular aneurysm repair (TEVAR) is an interventional technique used to correct a thoracic aortic aneurysm (TAA). The objective of this case report is to discuss a novel technique using a modified EVAR stent graft to seal off a perforation occurring during TEVAR. **Case Presentation:** A 57-year-old woman presented with epigastric discomfort, of about nine months duration with chest tightness and occasional breathlessness for the last three months. On physical examination, she was noted to have dilated veins at anterior chest wall with reduced air entry over left upper and middle zones. No other clinical findings were noted. Based on the chest X-ray, CT Thorax and CTA findings a diagnosis of proximal thoracic aortic aneurysm involving the aortic arch was made. The patient was planned for a Complex Endovascular approach. During the procedure patient developed a perforation of the left iliac artery. A novel technique using a modified EVAR stent graft was used to seal of the perforation. Patient was asymptomatic on subsequent visits with a decrease in size of the aneurysm. **Discussion:** This case illustrates the possibility of using endovascular approach to manage some very complicated aortic aneurysms which carries a high risk for surgery. Conventionally, endovascular approach is not recommended for disease affecting the arch of aorta. In this case, it required the use of stents as surgery was not a viable option. Simple perforations may be managed with prolonged balloon inflations and use of covered stents. In this situation a novel technique using a modified EVAR device was used to achieve hemostasis.