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Never underestimate the importance of surveillance – a case report of a patient with post-EVAR endoleaks

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Background:
Endovascular aneurysm repair (EVAR) has become a well-established approach in the elective treatment of abdominal aortic aneurysms (AAA). It represents a treatment of choice for high-risk patients ineligible for open surgery due to the increased risk of perioperative morbidity and mortality. However, it requires lifelong surveillance with CT aortography (CTA) or contrast-enhanced ultrasound due to more long-term complications compared to open surgery. Endoleak is the most common graft-related complication with type II endoleak being the most common type. Type I and III endoleaks (T1E, T3E) are the most dangerous type of endoleaks, both leading to pressurization of the aneurysm sac and rupture. We report the case of a 72-year-old male patient with various types of endoleaks after EVAR.

Case presentation:
In 2015 ASA IV patient with known asymptomatic infrarenal 6.6x6cm AAA underwent elective EVAR with main device and bilateral iliac limbs (Medtronic, Endurant II). His past medical history revealed myocardial infarction, ischemic cardiomyopathy, hypertension, pancreatitis, and cholecystectomy. He was on regular stent-graft surveillance. Until 2021 he had been free of any EVAR-related complications when he presented to the emergency department with cramping abdominal pain. CTA demonstrated the presence of T1aE and T1bE. ChEVAR with Aortic Extension 32mm (Medtronic, Endurant II) and BeGraft Peripheral 5x59mm for T1Ea, stent grafting with two additional main device extensions, 28x28mm and 13x13mm, for T1Eb followed by ballooning, was successfully performed. Follow-up CTA in 2022 revealed the presence of a T3E that was immediately managed with an additional 16x10x199 mm endograft extension and by repeat ballooning at areas of component overlap.

Conclusions:
Endoleak is an important complication for EVAR which is often asymptomatic hence regular follow-up is needed and immediate management is crucial to prevent future aneurysm rupture. Nevertheless, this case demonstrates the importance of lifelong attentive surveillance to promptly diagnose and treat complications.

Keywords:
Endoleak, endovascular aneurysm repair, surveillance