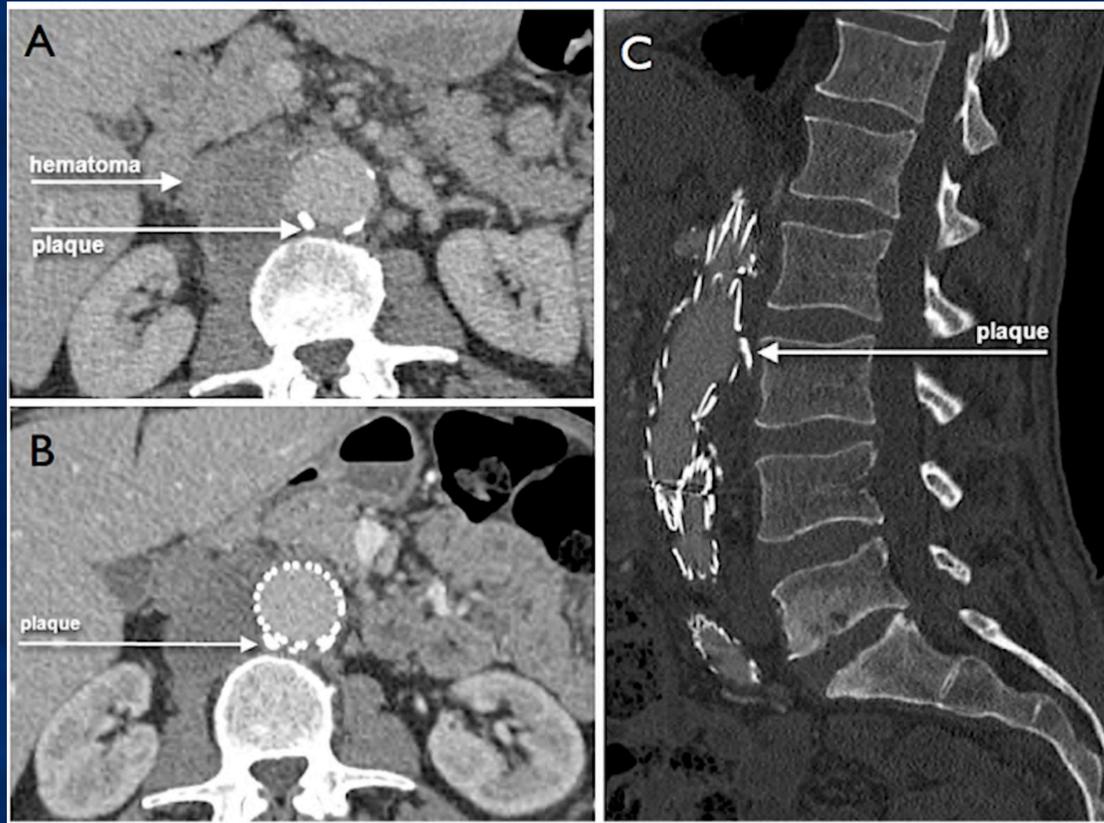


Aortic Rupture Following an EVAR Secondary to Graft Erosion

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Figure 1.



Case report

- A 68-year-old male patient was presented with retroperitoneal bleeding due to aortic plaque rupture (Fig. 1A). This unusual aortic syndrome was treated with endovascular graft placement. A Zenith bifurcated main body graft (TFFB-32-82-ZT) was used; an Excluder (PXL 161207) was used for the right limb of the graft, and a Zenith (TFLE 12-73-ZT) was used for the left limb of the graft. The case was done urgently and a mix-and-match approach was required due to endografts availability at the moment. Other than plaque that had been present on the previous CT, no unusual findings were revealed on the one-year CT control (Fig. 1).
- Two years after the EVAR, the patient was re-admitted with a seven-day history of severe abdominal pain. A CT angiography showed a large retroperitoneal hematoma, contrast extravasation, and a type 3 endoleak. Since the first procedure was performed the patient did not experience any trauma or prior intravascular procedures, which could be related to aortic or graft injury. The patient was treated immediately with an aortic infrarenal cuff (Jotec) that was placed percutaneously through the left groin (AFC) under local anesthesia. Before the cuff was placed, following control angiography a hole in the graft became evident. Because it was possible to insert an angiographic catheter through the hole in the graft (Fig. 2), the hole diameter was at least 2 mm.
- Six months post-procedural CT imaging showed adequate cuff positioning with no endoleak or contrast extravasation (Fig. 3). There were no systemic or CT signs of infection

Figure 2.



Discussion

- This case report presents a unique complication in endograft placement for an unusual aortic syndrome, ruptured aortic plaque. It is very suspicious that the type 3 endoleak was secondary to the sharp aortic plaque. In the presented case, plaque was evident in the same place in all of the CT controls. The plaque was responsible for the aortic rupture and was in close proximity to the endograft (Fig. 1A).
- Nevertheless, two years exacerbated factory defect. Subsequently, the Cook Company denied any graft failures related to new graft generation as well as experience similar to our case. Hence, avoiding aggressive balloon dilatation in areas of the aorta with “sharp” calcified plaque may be wise.
- There is a large population of elderly and frail patients that seems to be more associated with penetrating ulcers. This clinical situation is extremely rare, but may be under-reported. Using endograft again instead of converting to some sort of open approach is more beneficial in urgent cases and elderly patients, at least as a bridge procedure.

Figure 3.



Conclusion

The sharp aortic plaque may have been responsible for the endograft tear. Options to use endograft again or to convert to open approach are both possible. Better screening the morphology of the aorta lumen may become more common in the future. After an endograft is deployed, this type of complication is difficult to predict