Endovascular repair following post-open repair endoleak from distal anastomosis

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Background

Although para-anastomotic aneurysm is a well known complication following open abdominal aortic aneurysm repair, endoleak into the excluded aortic aneurysm sac is not well known. We present successful exclusion of the endoleak with endovascular relining of both the proximal and distal anastomosis.

Case presentation

An 78 years old male patient presented with inflammatory symptomatic 8 cm AAA with short infra-renal neck (figure 1). He has a history of cigarette smoking, chronic obstructive pulmonary disease and peripheral vascular disease with claudication. He underwent urgent open repair using 22 millimetre Dacron tube graft. He had a calcified distal aorta with extensive inflammatory component (figure 2). The aortic sac was closed using PDS 3/0 suture. He had post operative spiking temperature with basal pneumonia which was treated. However, at four weeks there was still temperature spikes. A CT scan was done to check of the repair which showed no air bubbles or collection (figure 3 &4). At two months post-operatively he had CT colonography for assessment of colitis. The latter scan revealed endoleak from the distal anastomosis into the closed aortic sac (figure 5 &6).

Endovascular repair

On table angiogram confirmed the leaking into the aortic sac from the distal anastomosis (figure 7 &8). An urgent endovascular repair was carried out using Endurant 2 endograft Under spinal anesthesia (figure 9). At one month post EVAR; follow up CT scan & Duplex showed no evidence of endleak (figure 10 & 11).

Figure 1
Preoperative
Figure 2

Figure 3
One month
Post open repair

Figure 4
One moth

Figure 5 &6
Two months
Large endoleak

Figure 7

Figure 8
Endoleak
From distal anastomosis

Figure 9

Figure 10 &11
One months
post EVAR
No endoleak

Conclusion

Endoleak albeit type 1 could follow open Abdominal aortic aneurysm repair with its associated risks of sac expansion or Rupture. Endovascular relining of endoleak using bifurcated stent graft is feasible and safe option.