



## Abdominal Aortic Aneurysm Repair 10 Years after Aorto-Bifemoral Bypass

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### Abstract

Ten years following aorto-bifemoral bypass performed for Leriche's syndrome, a patient experienced postprandial abdominal angina and resultant weight loss. Aortic occlusion distal to graft suture line and subsequent aneurysm formation with thrombus in it was detected. There was 99% stenosis at the origin of celiac trunk and complete occlusion of both superior and inferior mesenteric arteries. Infrarenal aortic graft interposition and exclusion of aneurysm sac were performed concomitant with aorto-celiac and aorto-mesenteric bypass.

**Keywords:** Aneurysm; False; Aorta; Abdominal; Surgery

### Introduction

Abdominal Aortic Aneurysm (AAA) has an incidence of 4.0% to 7.2% in male population screening studies. However, it was also shown that in patients below 65 years of age, aortas with subaneurysmal dilatation (25 mm to 29 mm) progress to overt AAA with an incidence of 52.5% to 60% in 5 years period [1]. There is no clear documented rate on development of AAA following surgery for aortoiliac occlusive disease. Here we report a case who underwent aortobifemoral bypass 10 years ago and now operated on for AAA concomitant with aortomesenteric and aortoceliac bypass.

### Case Presentation

A 69-year-old male patient was admitted with the complaints of abdominal angina and resultant weight loss in the preceding 6 months. Ten years ago, he was operated for Leriche's syndrome and aorto-bifemoral bypass was performed with a 16/8 mm dacron graft. He was cachectic and physical examination revealed a pulsatile mass on left upper and lower abdominal quadrants with continuous murmur on the course of the graft. Bilateral femoral and distal pulses were palpable. Abdominal and lower extremity CT angiography revealed total occlusion of the aorta below the level of graft anastomosis and 45mm × 55 mm aneurysm formation in the native aorta distal to the suture line (Figure 1). There was 99% stenosis at the origin of celiac artery and total occlusion of both superior and inferior mesenteric arteries (Figure 1e). Following midline laparotomy native abdominal aorta above and below the renal arteries were explored. Celiac trunk with left gastric, common hepatic and splenic arteries was dissected. Superior mesenteric artery was also dissected. Aortic clamp was applied at the suprarenal level. Abdominal aorta was transected below the renal arteries. Renal arteries were perfused with Ringer's lactate while proximal end of the 16 mm tubular dacron graft was anastomosed to the native aorta. The aneurysm sac was seen posterior to the previous aortobifemoral bypass graft within the occluded native aorta (Figure 1f). Aorto-left gastric and aorto-superior mesenteric bypasses were performed with saphenous vein grafts (Figure 1g). The distal end of the tubular graft was anastomosed to the old graft, which was transected proximal to its bifurcation (Figure 1h). The postoperative course of the patient was uneventful with cessation of abdominal angina.

### Discussion

The definitive therapy for aortic aneurysms is endovascular repair or surgery in favor of endovascular repair. The patient mandated open surgery since aorto-mesenteric bypass was also required for treatment of visceral arteriopathy. The surgery was technically not so challenging since the patient was cachectic with almost no abdominal and visceral fat tissue.

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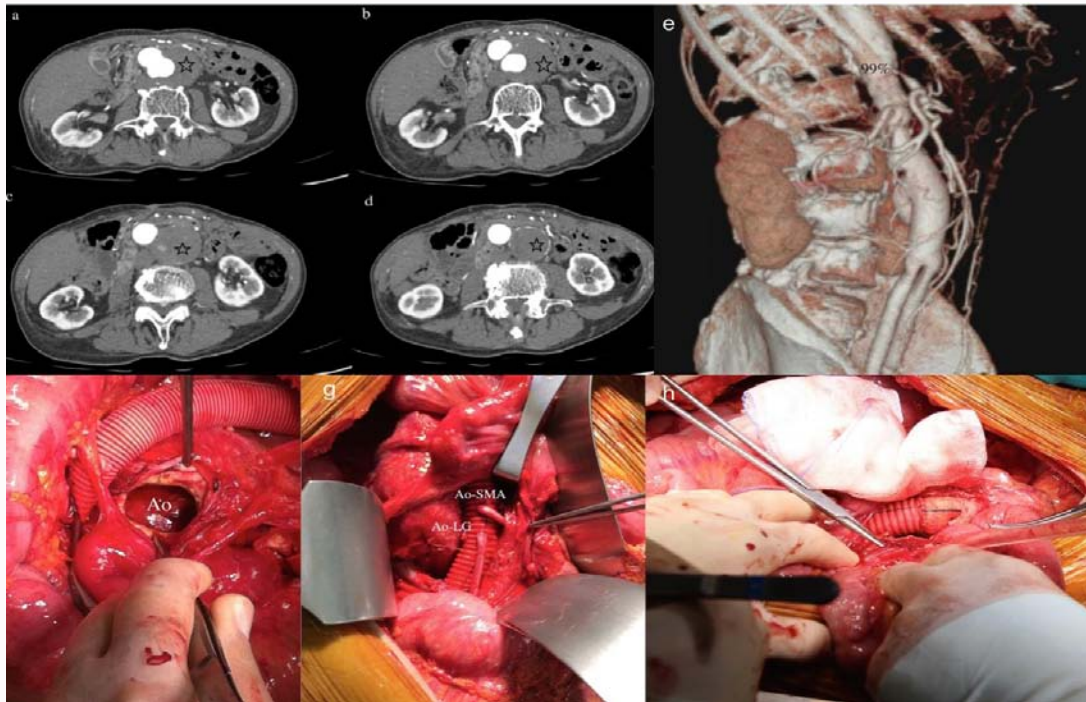
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**Figure 1:** a) The proximal suture line of the graft where contrast is visualized in both native aorta and graft. b) The double lumen appearance of the graft and aneurysmatic native aorta (45 mm × 55 mm). c) The level where native aneurysmatic abdominal aorta is totally occluded. d) The distal occluded aorta with calcified wall. e) Three-dimensional view revealing 99% stenosis at the celiac trunk origin. f) The aneurysmatic abdominal aorta is visible with thrombus inside after transection at the infrarenal level. g) The aorto-left gastric and aorto-superior mesenteric bypass grafts. h) The distal end of the tubular graft anastomosed to the transected tubular portion of the old aorto-bifemoral graft.

## References

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