

Successful Treatment Of Large Syphilitic Aortic Aneurysm With Hybrid Open And Endovascular Approach: Case Report

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Introduction:

We are presenting a case of large aortic arch and descending aorta syphilitic aneurysm treated successfully using hybrid open and endovascular technique.

Case presentation:

64-year-old patient who was treated 20 years ago for syphilis and currently with late syphilis. Presented initially with hoarseness of voice for two months. And found to have 9 cm aortic arch aneurysm with 5 cm thoracic descending aortic aneurysm. (figure 1&2)

Given his comorbidities with low ejection fraction (EF 20%), CAD (mLAD 70% but negative stress test) and chronic kidney disease, a type 2 aortic hybrid procedure (debranching neck vessels and ascending aorta replacement, zone 0 TEVAR) was chosen as treatment strategy.

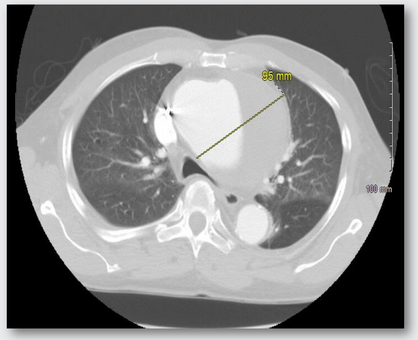


Figure 1: Aortic arch aneurysm (9 cm)

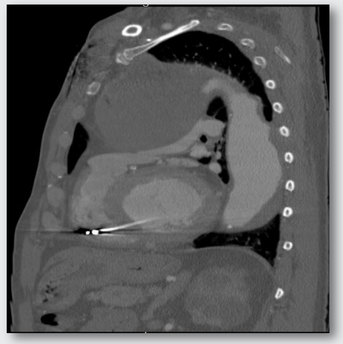


Figure 2: Thoracic descending aortic aneurysm

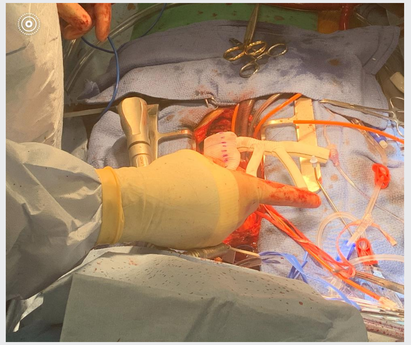


Figure 3: Open ascending aortic and arch replacement



Figure 4: Intra operative TEVAR

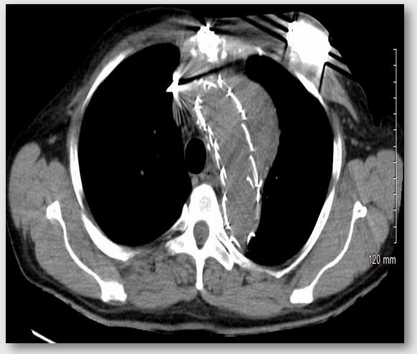


Figure 5: Post operative CT scan



Figure 6: Post operative CT scan

Reference:

1. Jackman Jr, J.D. Radolf J.D. Cardiovascular syphilis. *Am J Med.* 1987; 87: 425-433

2. B. Goldstein, A. Carroccio, S.H. Ellozy, *et al.* **Combined open and endovascular repair of a syphilitic aortic aneurysm.** J Vasc Surg, 38 (2003), pp. 1422-1425

Clinical course:

First stage included successful open ascending aorta replacement with 32mm Gelweave straight graft. Debranching and reconstruction of aortic arch vessels (Innominate artery, left carotid artery and left subclavian) with Gelweave trifurcated graft (12mm, 8mm, 8mm respectively. (Figure 3)

On post-operative day 3 he was taken back for descending thoracic aneurysm repair via endovascular approach (figure 4). Tapered 38-34 graft deployed at zone 0, two additional extension grafts of 34mm placed to land in the normal thoracic aorta.

Computed tomography after surgery showed successful exclusion of the thoracic aneurysm (figure 5 & 6).

Patient was discharged home in stable condition to complete 4 weeks of Doxycycline.

Discussion:

Tertiary syphilis has become uncommon diagnosis given appropriate treatment with antibiotics at early stages of the disease. However, tertiary syphilis may occur up to 30 years after the originally untreated infection. When it affects the aorta, it causes necrosis and scaring which leads to aortic aneurysm which are commonly saccular (1)

In a fragile patient with multiple comorbidities, hybrid approach is an attractive choice for treatment of ascending arch and descending thoracic aorta aneurysms with absence of enough landing zone for safe deployment of endovascular graft (2)