Novel And Innovative Hybrid Technique
For Type A Aortic Dissection:Ascending Aorta With Total Aortic Arch Fenestration Technique

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Objective:

Open total aortic arch reconstruction remains the gold standard, which is one of the most challenging operations in aortic arch surgery. However, it requires cardiopulmonary bypass and circulatory arrest, and, therefore, some patients may not tolerate it. We report our innovative clinical experience of thoracic endovascular aortic repair (TEVAR) for complicated Stanford type A dissection with fenestrated stent-graft in the entire aortic arch, which is Minimally invasive techniques.

Methods:

From July 2015 to January 2019 in our hospital, 12 cases (9 Male and 3 Female, age 50-80 years old, mean age 61.83 10.5 years old) with complicated Stanford type A aortic dissection, underwent replacement of the proximal ascending aorta with thoracic endovascular stent graft (TEVAR) using self-modified fenestrated stent which is aligned into the branches of the total aortic arch. The entry of the primary tear was located at the proximal ascending aorta in 8 cases (Debakey type I), 4 case where involved in the aortic arch with the proximal descending aorta.

Result:

In all patient's surgical technical success rate was 100%, There were no intraoperative complications, and there was no evidence of endo-leak in 3 months postoperatively. Hospitalization duration was 9 (6-13) days.

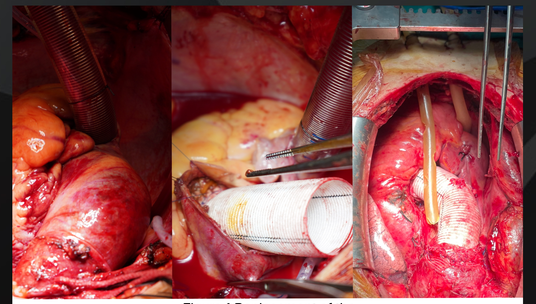


Figure 1 Replacement of the proximal ascending aorta.

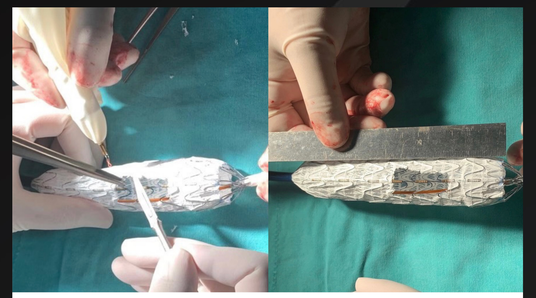


Figure 3 Total Aortic Arch Fenestration Technique

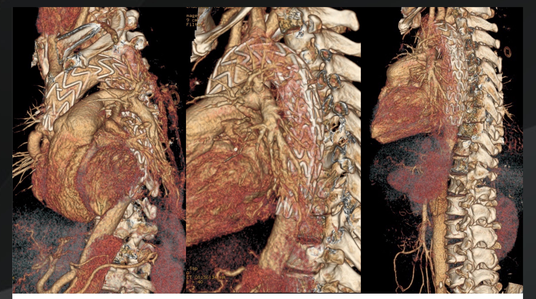


Figure 5 CTA after surgery

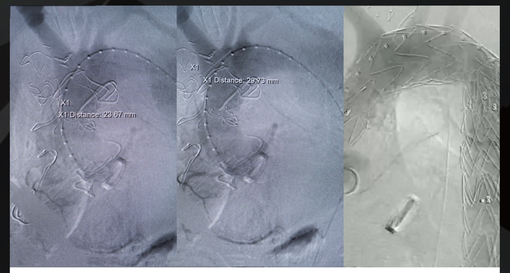


Figure 2 Intraoperative view of implanted TEVAR

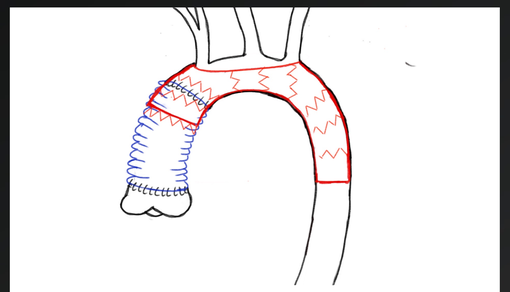


Figure 4 Diagram

Conclusions:

This hybrid technique by using TEVAR with fenestrated treatment is a minimally invasive and effective method to treat high-risk patients with complicated Stanford type A aortic dissection.