Western Surgical Association
2020 Annual Meeting
Monday, November 9, 2020
4:00pm – 6:15pm Pacific Time
– Virtual Meeting –
www.westernsurg.org | wsa@lp-etc.com | 913.402.7102

P 11. TOTAL ENDOVASCULAR REPAIR OF A RUPTURED ABERRANT RIGHT SUBCLAVIAN ARTERY ANEURYSM

Presenter: Asim Shabbir DO | Henry Ford Macomb Hospital
A Shabbir, E Kerby, S Hans

Background: Aberrant right subclavian arteries are present in 0.02 to 1.17% of the population. It originates distal to the left subclavian artery and subsequently courses posterior to the esophagus. Most individuals with this anatomic anomaly are asymptomatic. When this artery becomes aneurysmal, symptoms can include dysphagia, dyspnea, chest pain, or right upper extremity ischemia. No standardization exists regarding treatment of these lesions. Literature has typically described open and hybrid treatment of these lesions. Some case reports regarding complete endovascular approaches do exist; however, they usually involve a specialized endograft which has to be specially ordered. We present a case of total endovascular repair of a ruptured aberrant right subclavian artery aneurysm performed in an emergent fashion with the use of a standard TEVAR stent graft.

Methods: Our patient was an 83 year old male presented to the ED with worsening shortness of breath for three days. Medical history was significant for atrial fibrillation on apixaban as well as a stroke with residual right sided weakness. On arrival, patient was hemodynamically stable though he required supplemental oxygen. He had a CT angiogram of the chest which was significant for right aberrant subclavian artery aneurysm with active contrast extravasation as well as a right sided moderate pleural effusion. He was taken to the OR on an urgent basis.

Results: In the OR, bilateral groin access was obtained. A TEVAR stent graft was deployed just distal to the left subclavian artery, providing coverage over the origin of the right subclavian artery. Angiogram after TEVAR stent placement was significant for backfilling of the aneurysmal sac. We, therefore, coil embolized the right subclavian artery distal to the aneurysm but proximal to the internal mammary artery via percutaneous access of the right brachial artery. No filling of the aneurysmal sac was noted. No upper extremity revascularization was performed. The patient did well post operatively with adequate flow to his right upper extremity proven by arterial doppler and CT angiogram of upper extremity prior to discharge.

Conclusion: In a patient with a ruptured aberrant right subclavian artery aneurysm, where time is of the essence, a TEVAR can be performed with a standard stent graft without the need for upper extremity revascularization. We recommend performing upper extremity revascularization, i.e carotid-subclavian bypass, on only selective basis.