Staged Endovascular and Open Surgical Repairs for a Chronic Zones 3-11 Aortic Dissection

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Background

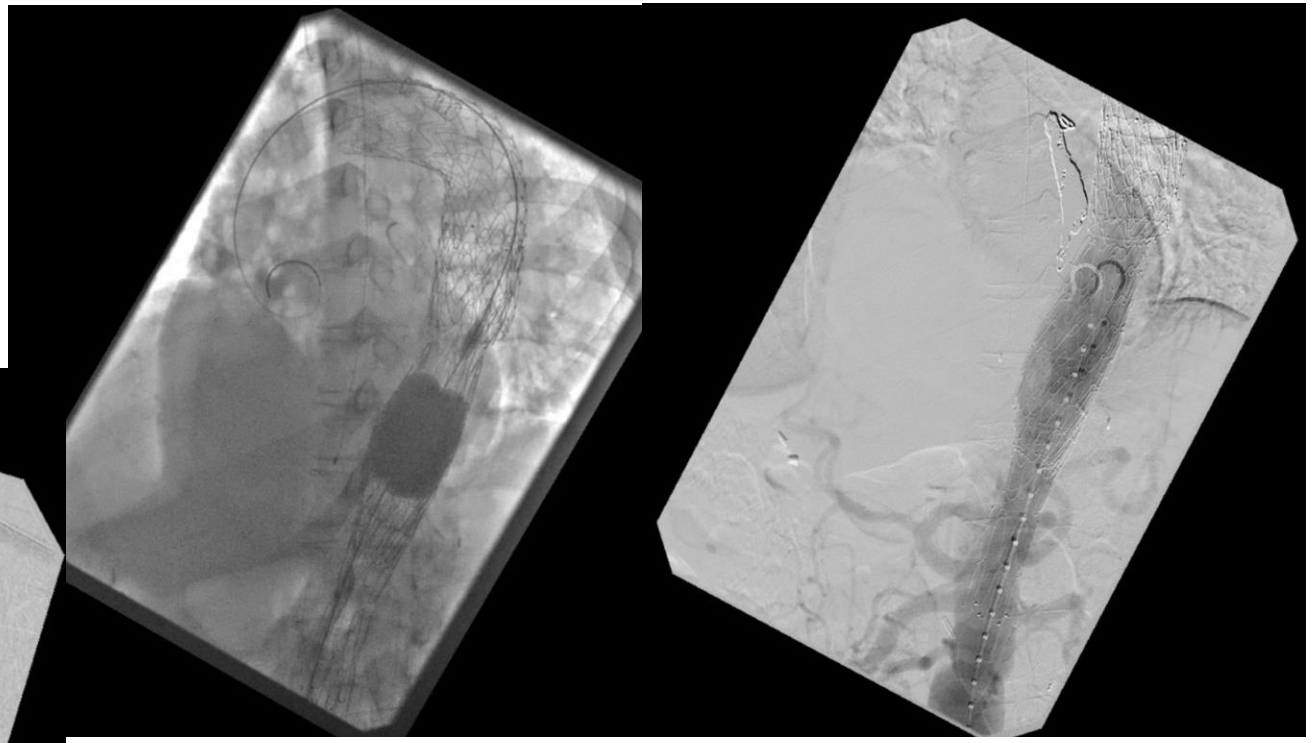
- An otherwise healthy 54-year-old male presented for second opinion regarding his zones 3-11 aortic dissection with multifocal aneurysms
- CTA with chronic appearing dissection with a large entry tear immediately distal to the left subclavian artery with aneurysmal degeneration of his right common iliac artery measuring 3.2 cm
- Multiple lumens and fenestrations throughout aorta, right renal artery with both true and false lumen filling, but all other visceral vessels were supplied by true lumen

First Stage (endovascular)

- Thoracic branched endoprosthesis with dissection stents down to renals *(image to the right)*
- Left external iliac artery viabahn placed to ensure easy re-entry to true lumen for further endovascular procedures

Second Stage (open)

- Open aortic repair with bifurcated dacron graft from infrarenal aorta to iliacs for infrarenal and iliac aneurysms
- Interposition bypass from the right limb of the Dacron graft to the common femoral artery with Dacron tunneled underneath inguinal ligament, end-end for left limb to common iliac



Third Stage (endovascular)

- TEVAR extension in thoracic aorta with Knickerbocker technique to rupture dissection septum *(image above left)*
- Coiling of false lumen proximal to Knickerbocker portion of TEVAR *(image above right)*

Conclusions

- Aortic dissection surgical repair remains difficult and is individualized to the patient's anatomy and pathology
- Staged endovascular and open repair remains a viable option for type B aortic dissections with multifocal aneurysmal degeneration