

# Acute Aortic Dissection Resulting in Claudication

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# Emergency department, outside hospital.

- 68 years old female with history of T2DM, HTN and family history of aortic dissection.

## Symptoms

- Severe **back** and **right arm, groin and leg** pain.
- No chest or abdominal pain.

**ECG** – nonspecific changes.

## Physical examination

- Marked distress.
- BP: R - 158/74  
L- 147/68
- HR – 71
- **Right leg weakness.**
- No abdominal tenderness.

## Lab result

9.1 } 13.6 }  
41.2 } 283

143 | 107 | 25 } 173  
4.0 | 32 | 1.2

- Trop – normal
- Lactate – 2 mmol/L  
(Normal range 0.5 - 1.6 mmol/L)
- D-dimer – NA

# CT- Angio

- **Stanford type A dissection.**
- Extensive thoracic and abdominal aortic dissection that originates in the **ascending aorta** and extends through the aortic arch, descending thoracic aorta, the abdominal aorta and into the **right external iliac artery.**



The patient was transferred by helicopter to our facility.

# UCHealth - Hospital course



## Aortic hemiarch replacement

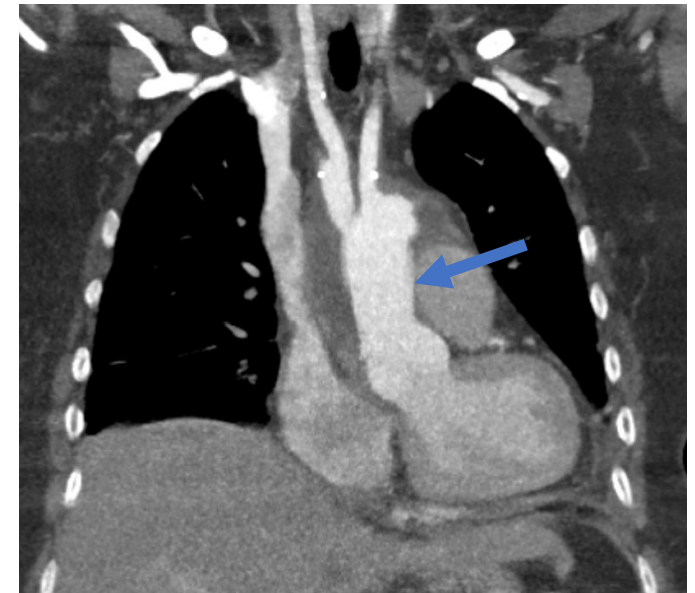


- **Follow up- CT Angio C/A/P**

- Stable ascending aortic repair with some hematoma/seroma
- Persistent aortic dissection flap beginning **distal to the left subclavian artery** takeoff and extending distally to the **distal right external iliac artery**.

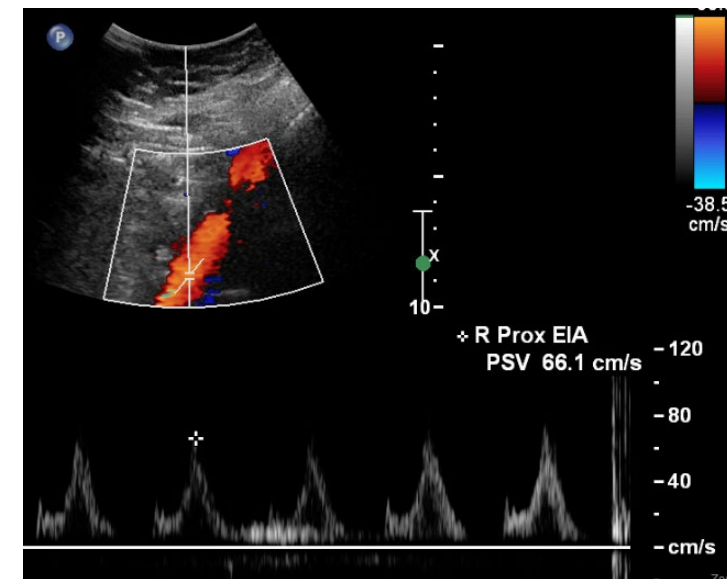
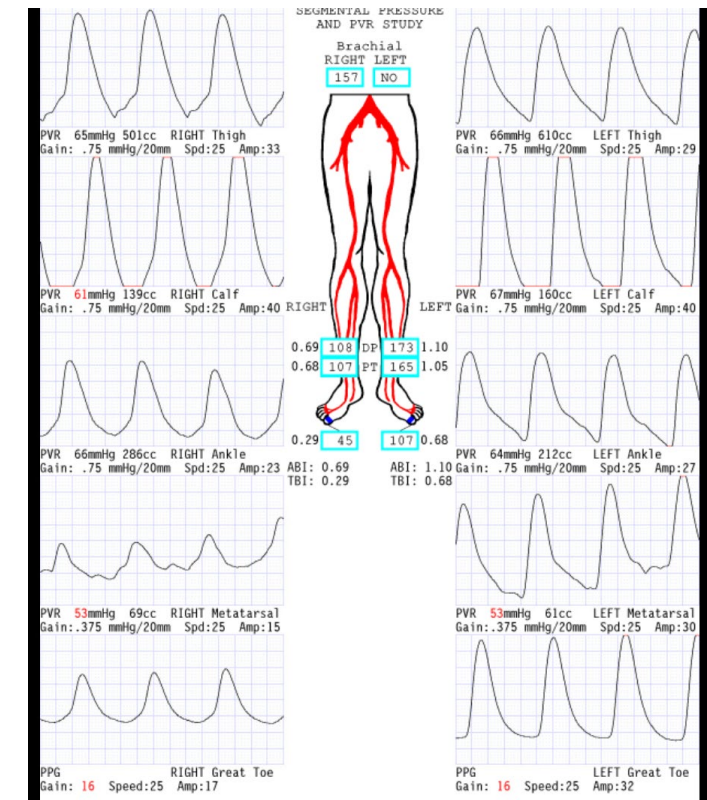


- **POD 14** - Discharged in a good condition with recommendations for **cardiac rehabilitation** and **multidisciplinary follow up** with cardiothoracic surgery and vascular medicine.



# Multidisciplinary outpatient clinic follow up

	Symptoms	Diagnostic studies
<b>1 month</b>	<p>Good overall recovery.</p> <p>"Her right leg gets heavy and weak with exertion, which may represent <b>claudication</b>".</p>	<p><b>Right ABI – 0.69</b></p> <p><b>TBI – 0.29</b></p> <p>Ct Angio – Stable findings.</p>
<b>3 - 6 months</b>	<p>"She has noted worsening of her right leg function with short distance <b>claudication</b> and impaired functional status."</p>	<p><b>Us Duplex RLE-</b> Monophasic low velocities at REIA and distally.</p> <p><b>CTA -</b> A focal near occlusion of the right external iliac at its origin off the common.</p>

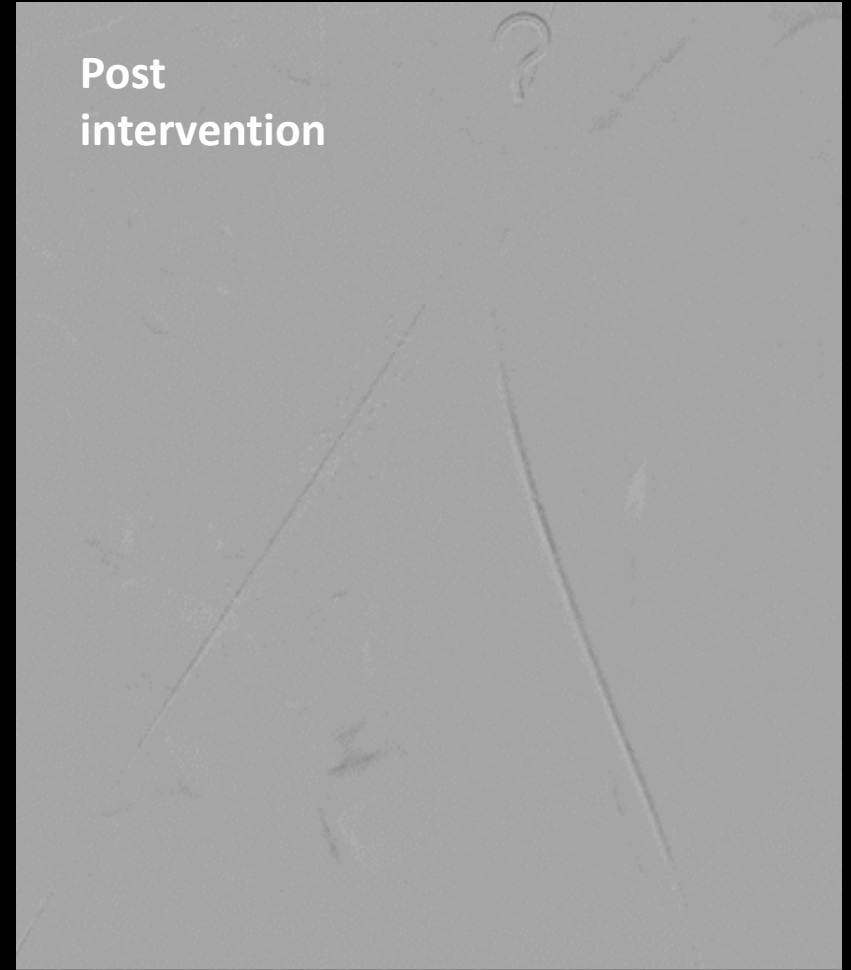
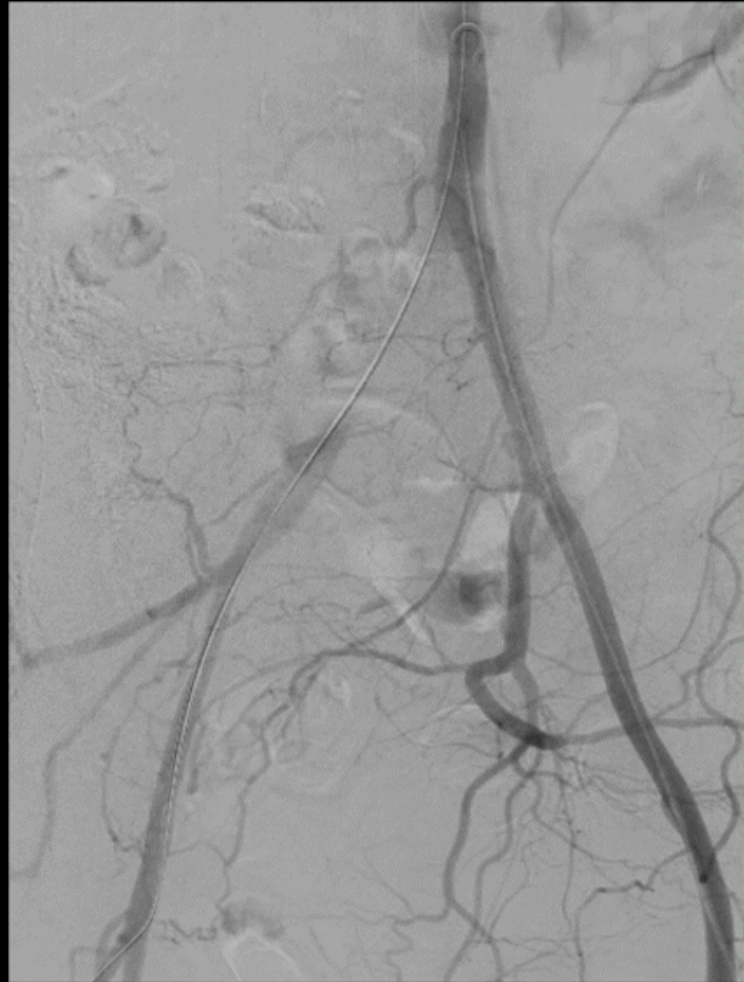


# Common and External Iliac Stenting

- **Right common and external iliac stenting of right common iliac artery and right external iliac artery.**
- [Overlapping covered, and non-covered balloon expandable stent]

## **Post procedure:**

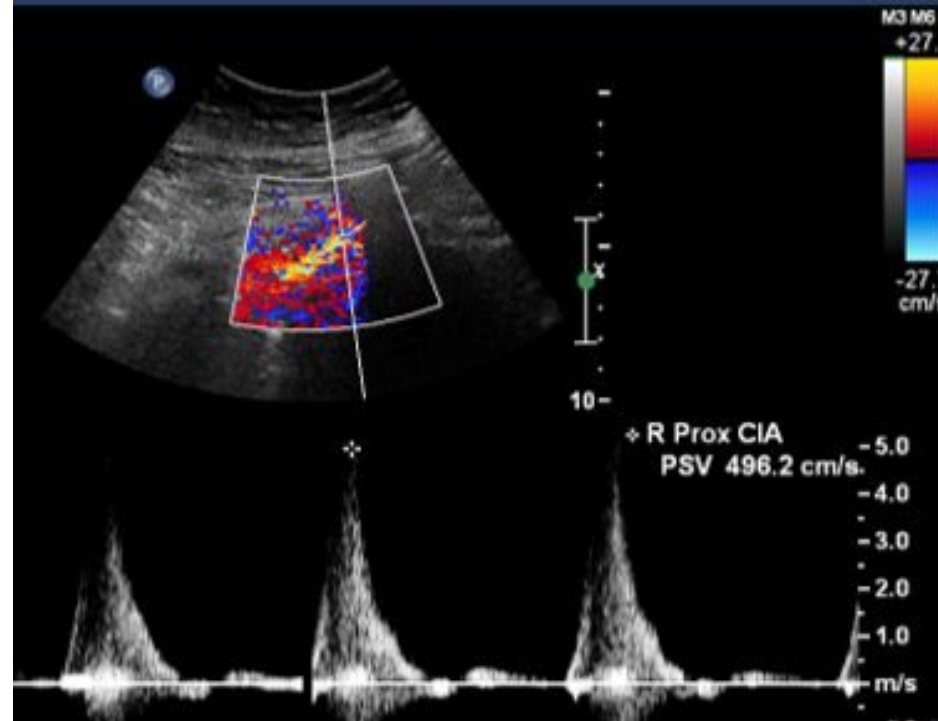
- Improvement to right thigh, hip and calf claudication.
- **2 weeks follow up:**  
**Right ABI - 0.88**  
**TBI - 0.51.**



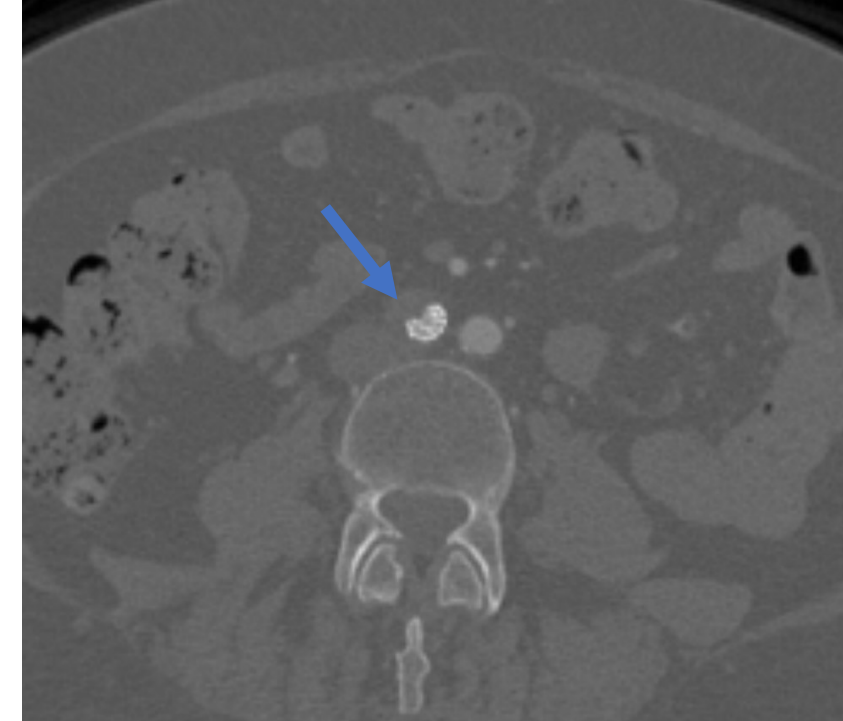
# 1 month post intervention

Recurrent buttock symptoms at exertion.

Given the patient symptoms and imaging results, a **second intervention** was planned.

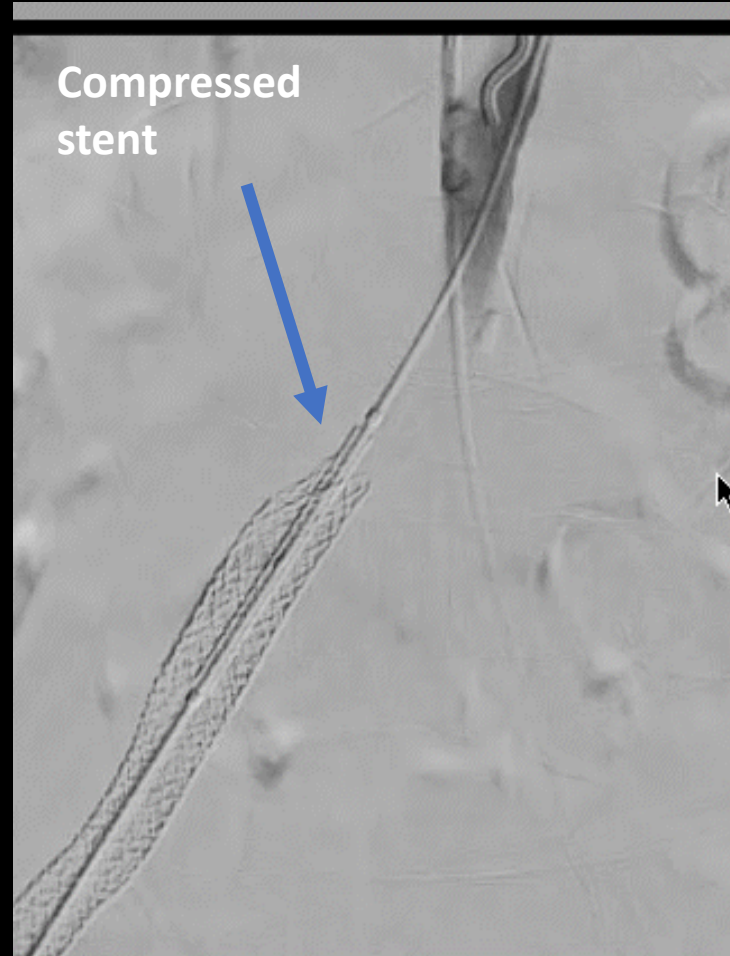
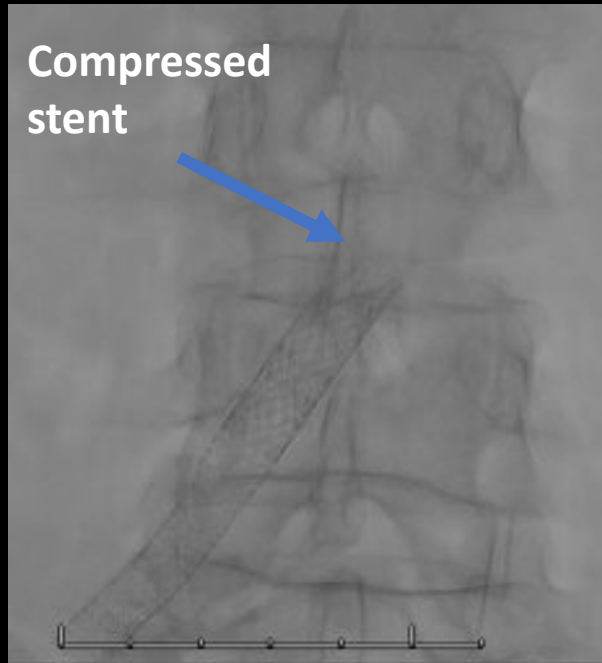


**Duplex US** - Elevated velocity at the proximal aspect of the stent.



**CT Angio** - proximal aspect of the CIA stent is **deformed and appears crushed**, likely from the dissection flap.

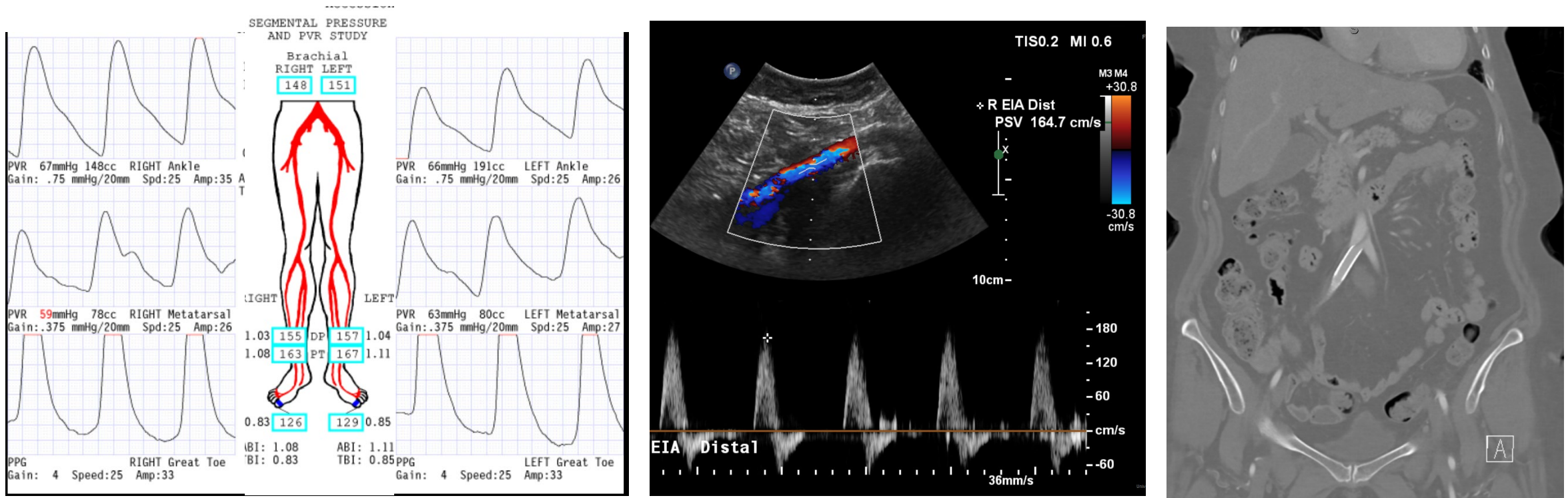
# Second Peripheral Vascular Intervention



**Second stent at the proximal right common iliac artery.**  
[Covered, balloon expandable.]



# One year post the 2<sup>nd</sup> peripheral intervention



- "The patient has no leg discomfort with walking."
- ABI is improved, stent is patent by duplex.
- **Close multidisciplinary clinical and imaging follow up is planned.**

Thank you



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# Summary

- A 68 year-old female with **acute type A dissection**, extending to the **right external iliac artery**.
- After a hemiarach replacement, **claudication** developed and was treated with right common iliac stenting.
- **Close multidisciplinary clinical and imaging follow up is planned.**