Hybrid procedure for Complicated Acute Aortic Dissection type B in a young patient

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Disclosure

Speaker name:

Nguyen Tung, Son

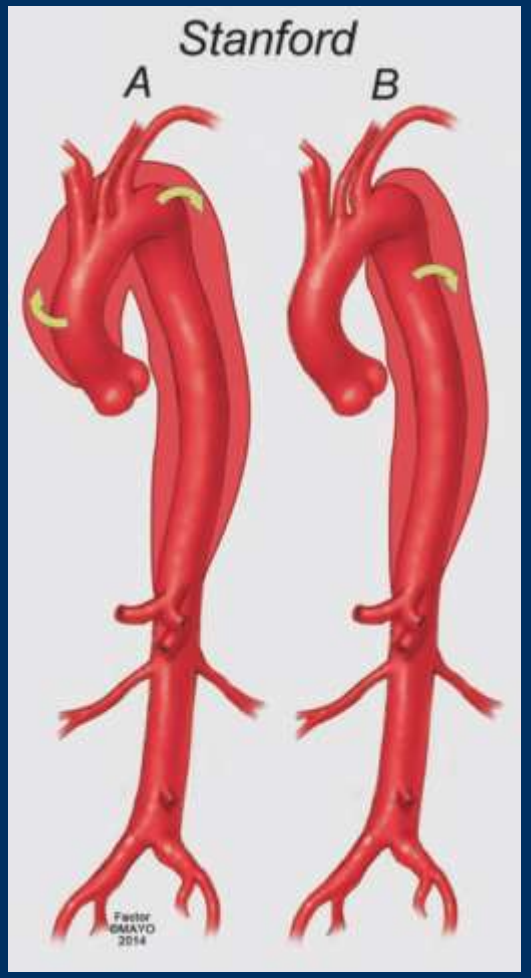
I have the following potential conflicts of interest to report:

- ☐ Consulting
- ☐ Employment in industry
- ☐ Stockholder of a healthcare company
- ☐ Owner of a healthcare company
- ☐ Other(s)

- ☑ I do not have any potential conflict of interest

Background

-Type B aortic dissection: is result of a tear in the intimal arterial layer, creates a flap, which divides the aorta into a true lumen (TL) and a false lumen (FL).



Stanford classification of aortic dissection

-Timing:

+ Acute: < 14 days.
+ Sub acute: 15-90 days.
+ Chronic: > 90 days.

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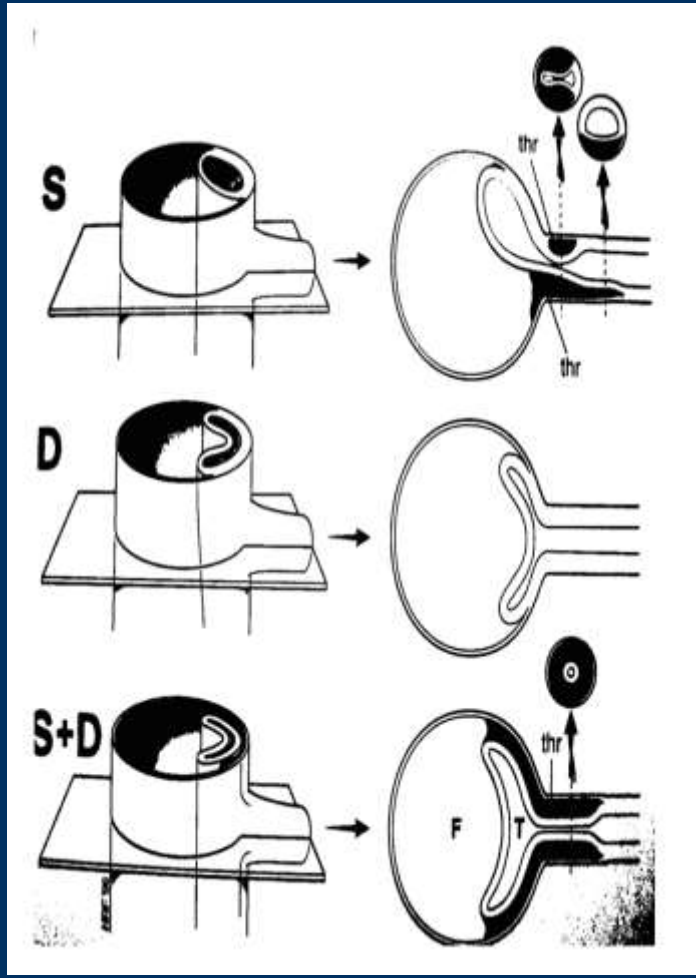
Background

Complication in ATBAD:

- Refractory hypertension or pain.
- Hemodynamic instability.
- Mal-perfusion syndromes
+ Dynamic obstruction.
+ Static obstruction.
- Aortic rupture
- Hypotension and shock.

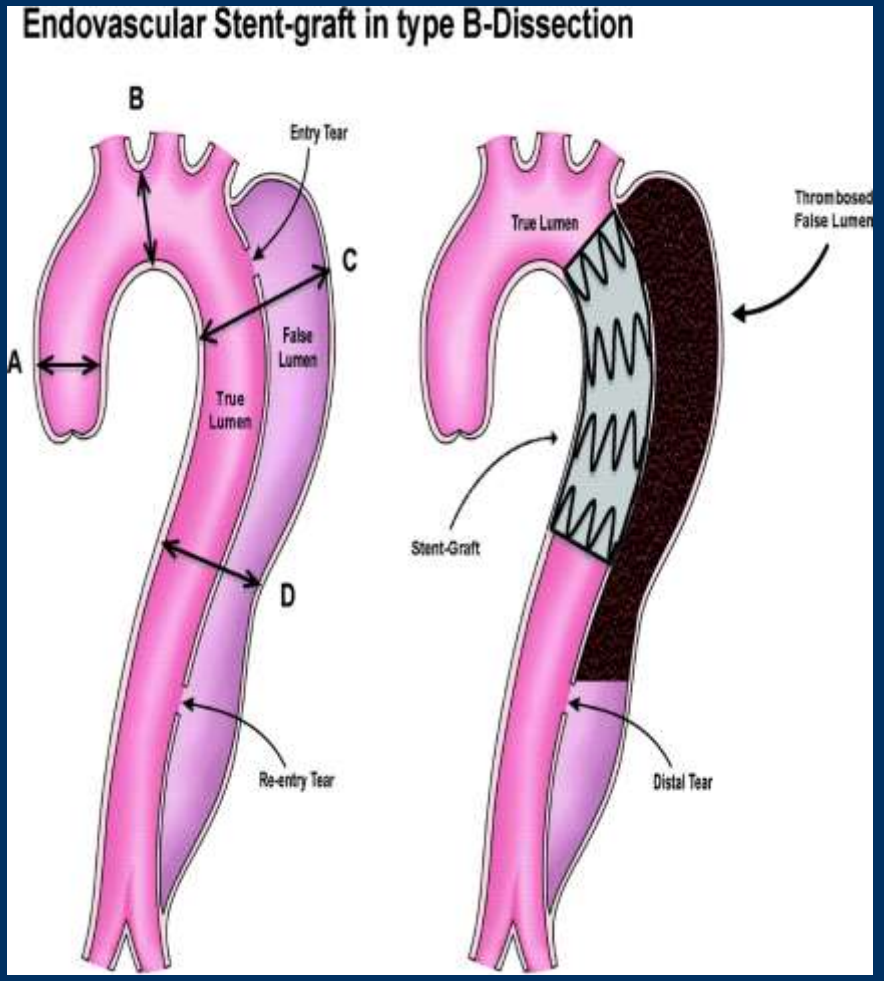


Williams et al. Radiology. 1997;203:37-44

Background

TEVAR for ATBAD:

- Seal the proximal primary entry tear.
- Promoting false lumen (FL) thrombosis.
- Management Mal-perfusion.
- Prevent aneurysmal degeneration, rupture or death.



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Medical report - 1st Patient

- **Gender**: Male.
- **Age**: 33 y.o
- **History**:

+ Hypertension (3 years not controlled).
+ Dyslipidemia
+ Alcohol abuse and tobacos use.
+ No DM. No family history.

- **Complain with : Dyspnea and acute chest pain.**
- **Clinical sign : Femoral A. : weak pulse.**
- **Urea /Creatinin: 11.2/216**

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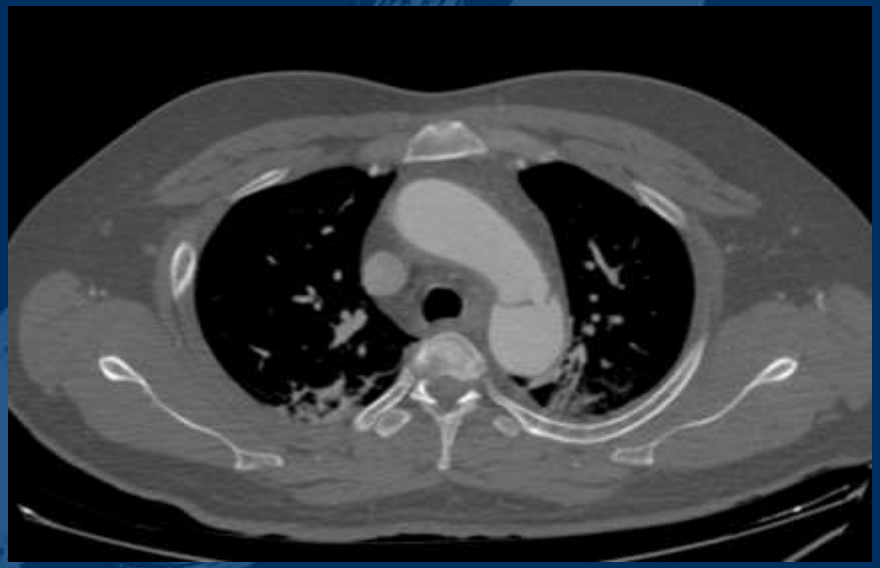
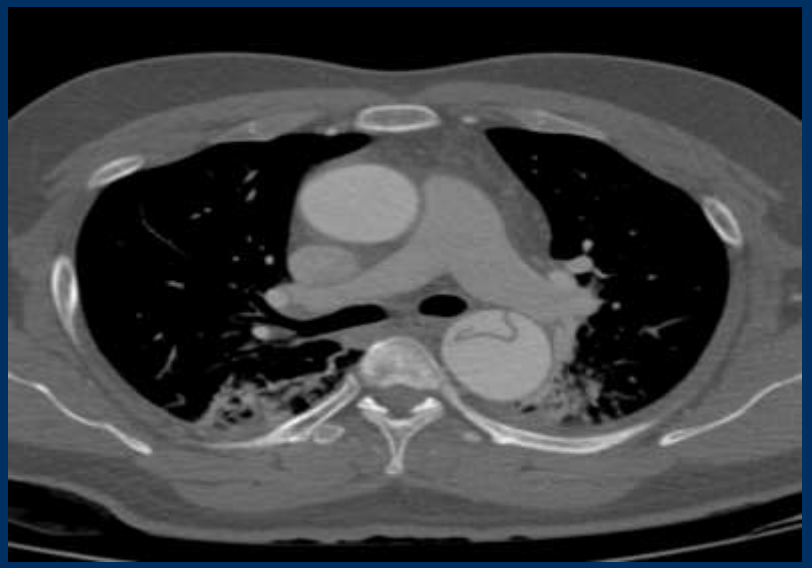
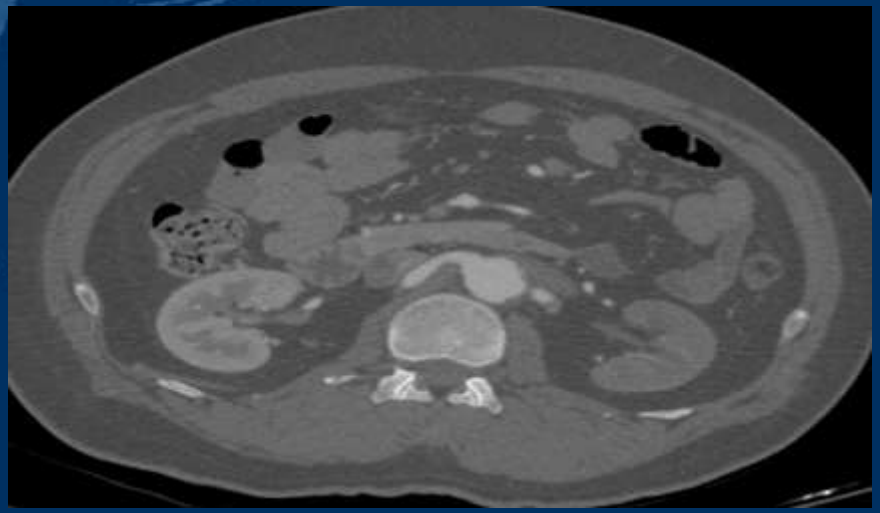
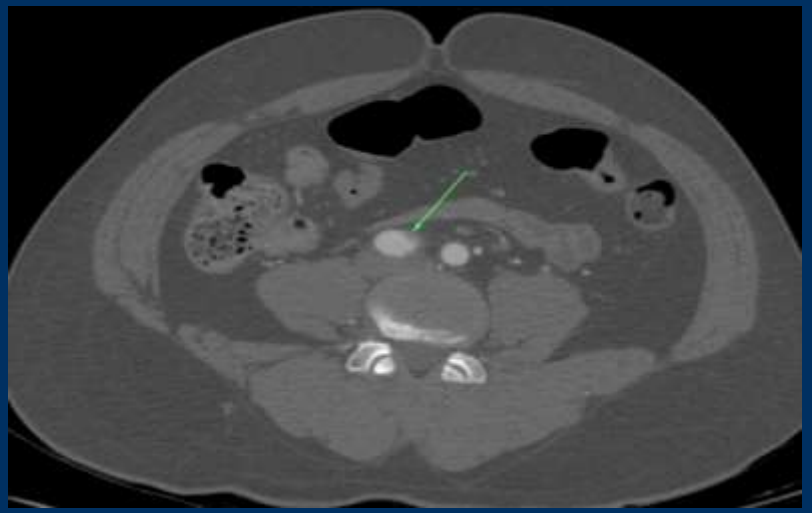
Medical report - 1st Patient

- MsCT 64s:









Hybrid Room from Viet Duc Hospital

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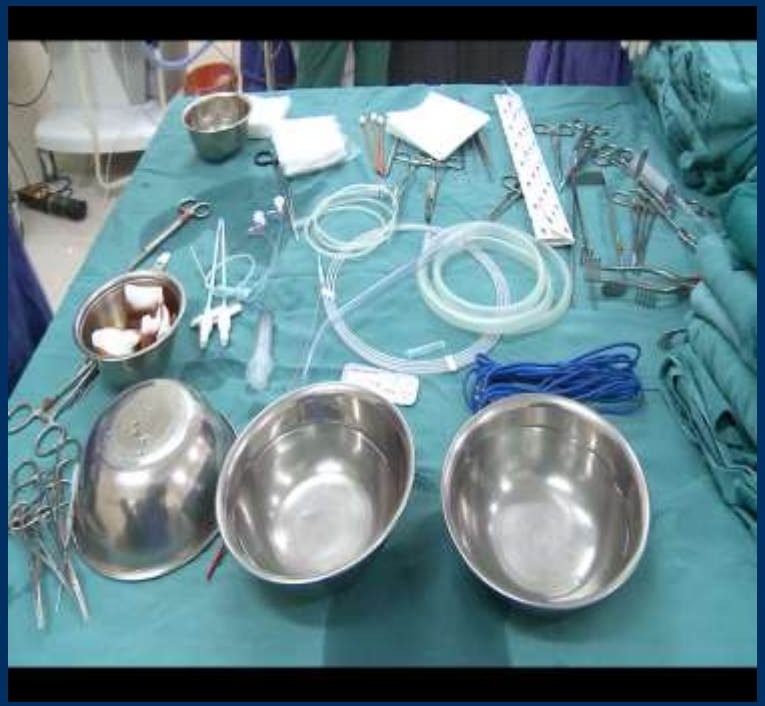
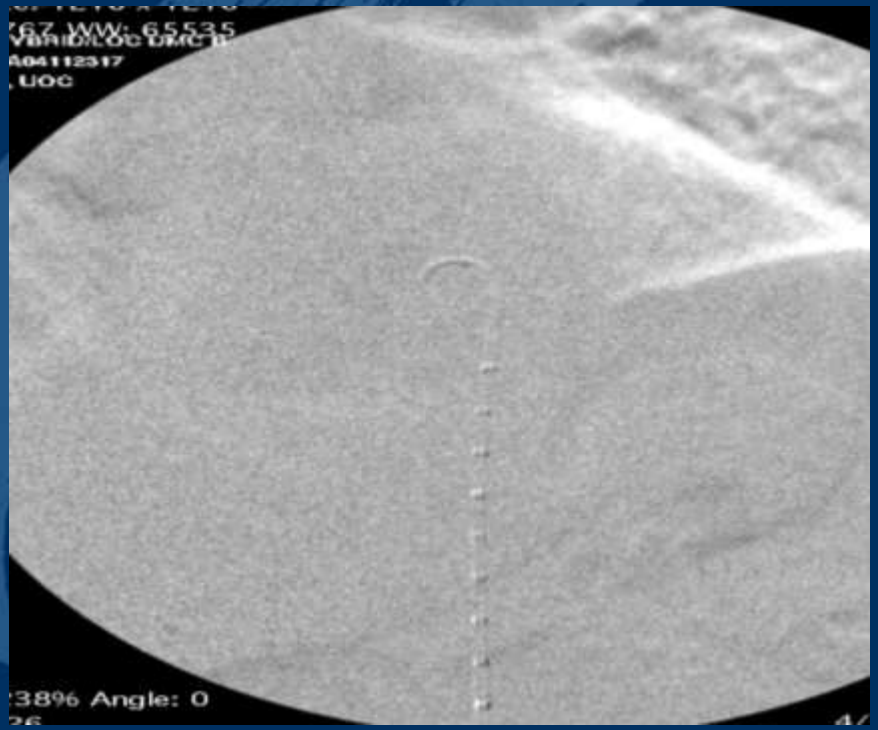
- **General Anesthesia.**
- **Step 1st** : Right-Left Carotid A. Bypass.
- **Step 2nd** : Exposure both side Femoral A. → Sheath 12F.

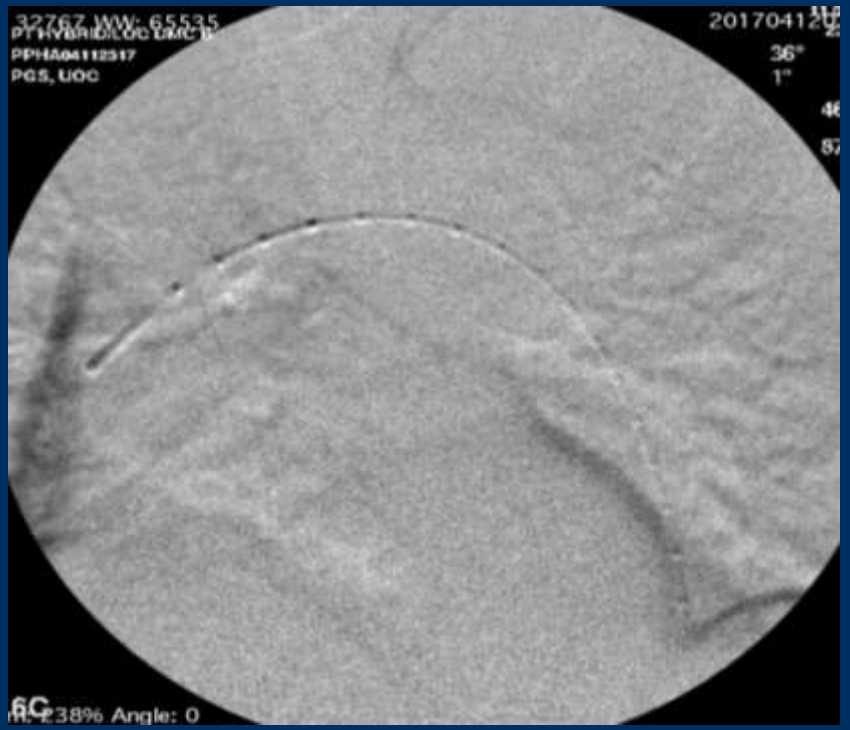
+ Percutaneous Radial access → Sheath 5F.



- **Step 3rd:**

+ Pigtail + Terumo wire through Left Femoral A. to True Lumen (TL)

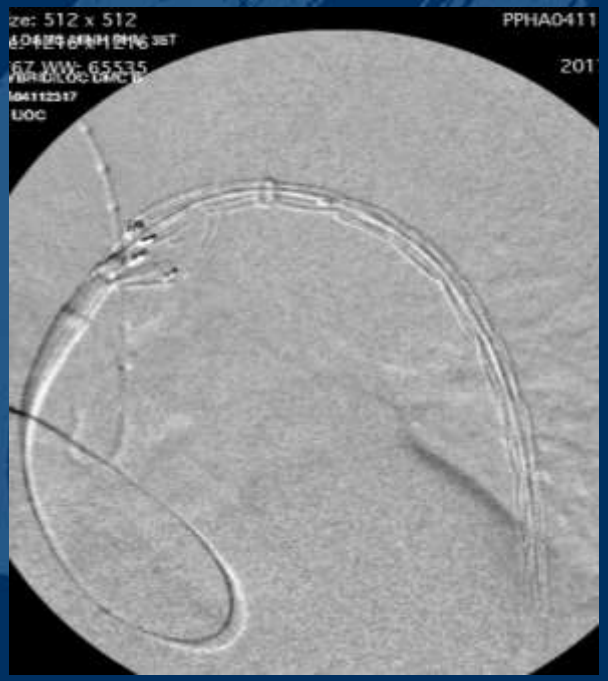


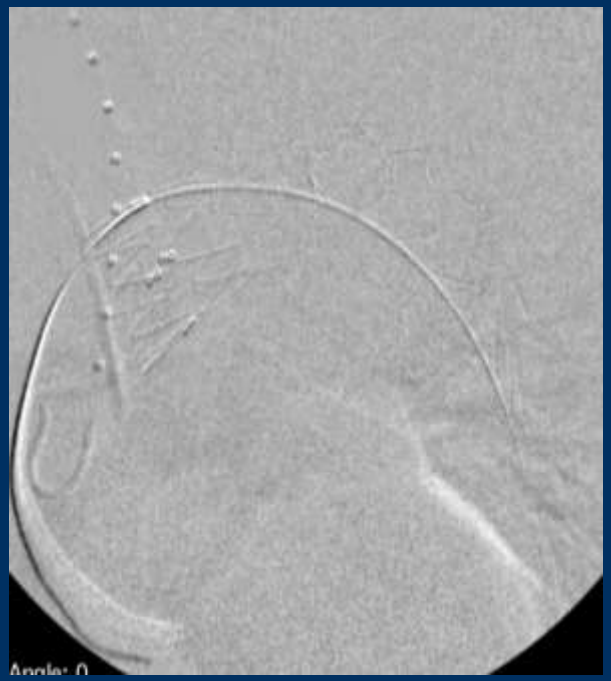


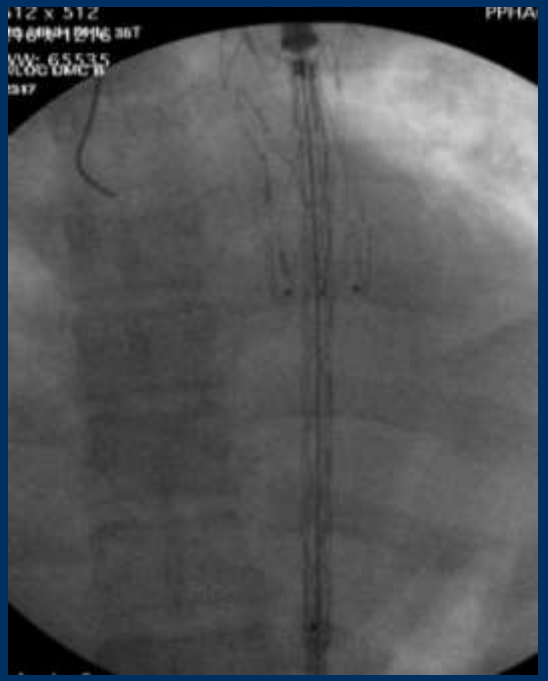
- **Step 4th**:

+ Another Pigtail + Terumo through R-Radial A. to aAo to check angiography.

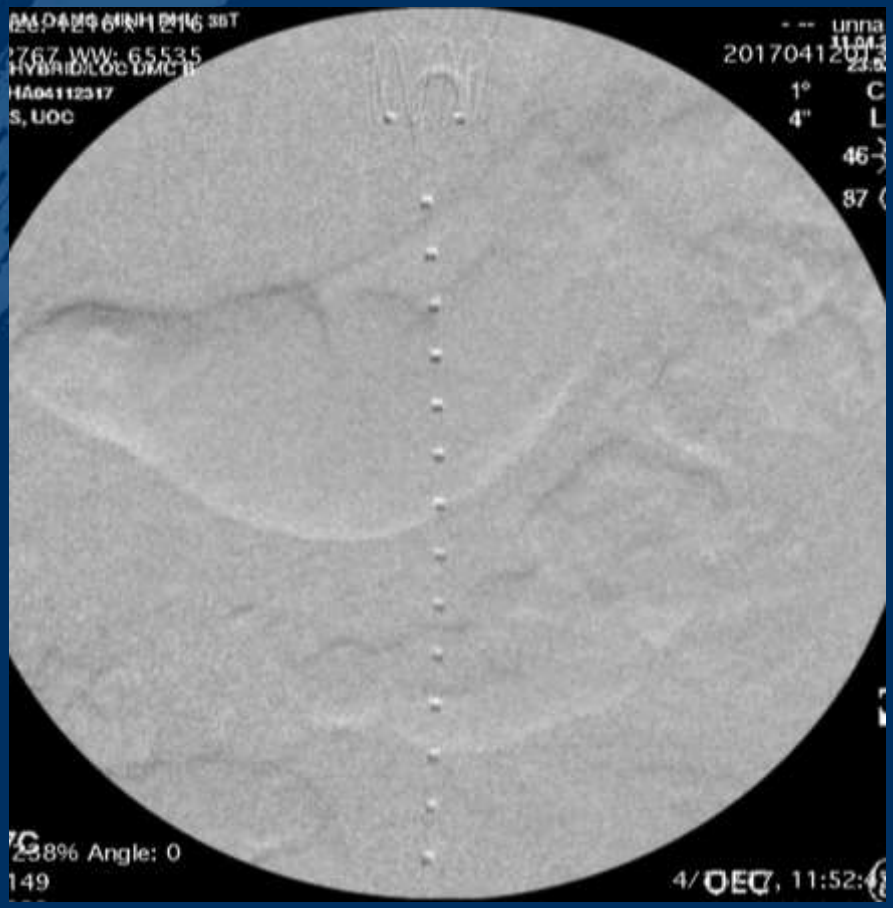
+ Change Stiff wire (Lunderquis-Cook) and advance the device (Valiant Thoracic) 30*30*200 and 30*26*150 – local above Celiac A.





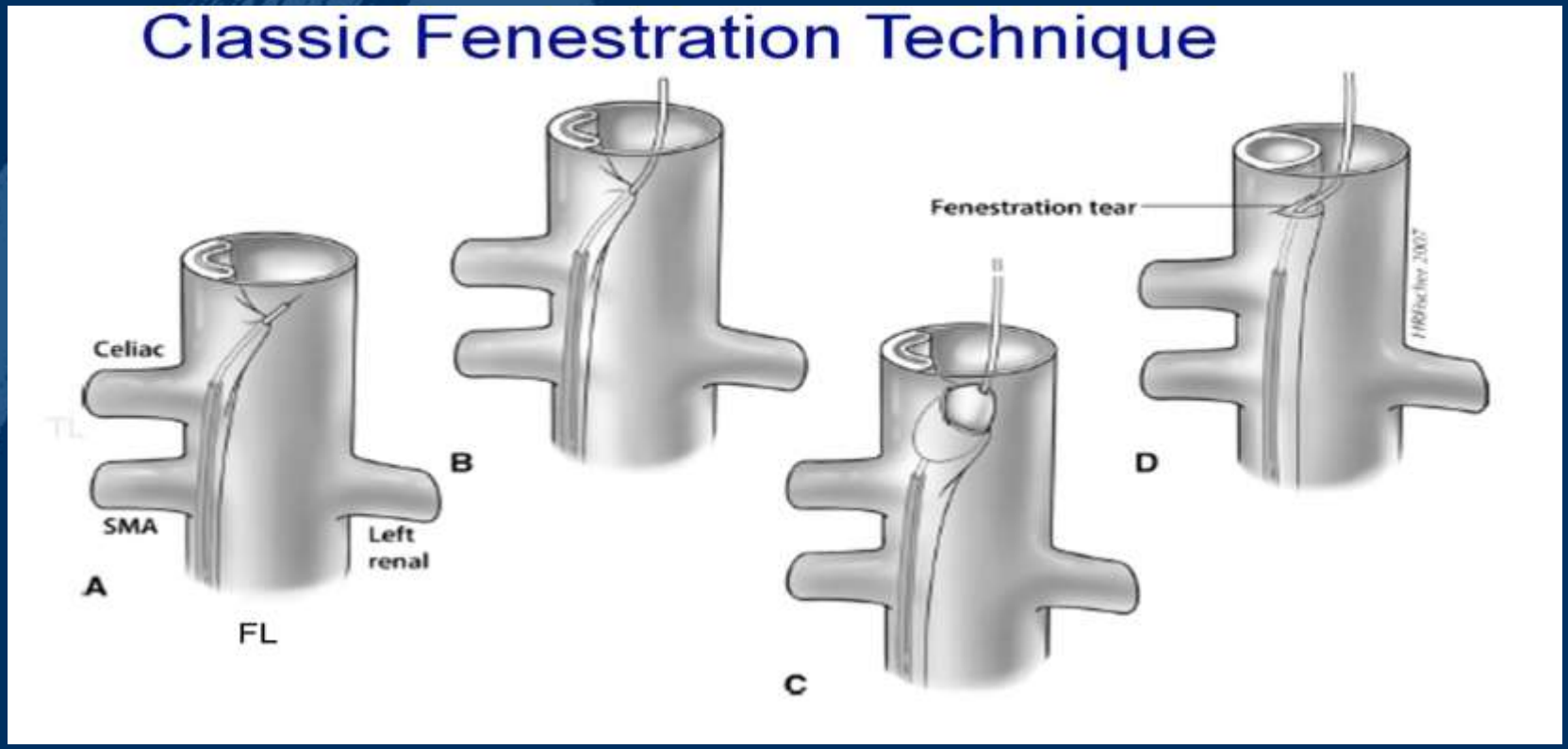


- **Step 5th**: Check Angiography again: No Endoleak, no re-flow, Celiac + SMA's flow good, Left Renal A.'s flow increase better but……



- **Step 6th**: And the answer is …….. Classical technique:

→ " Percutaneous Fenestration"



William and al, 2009

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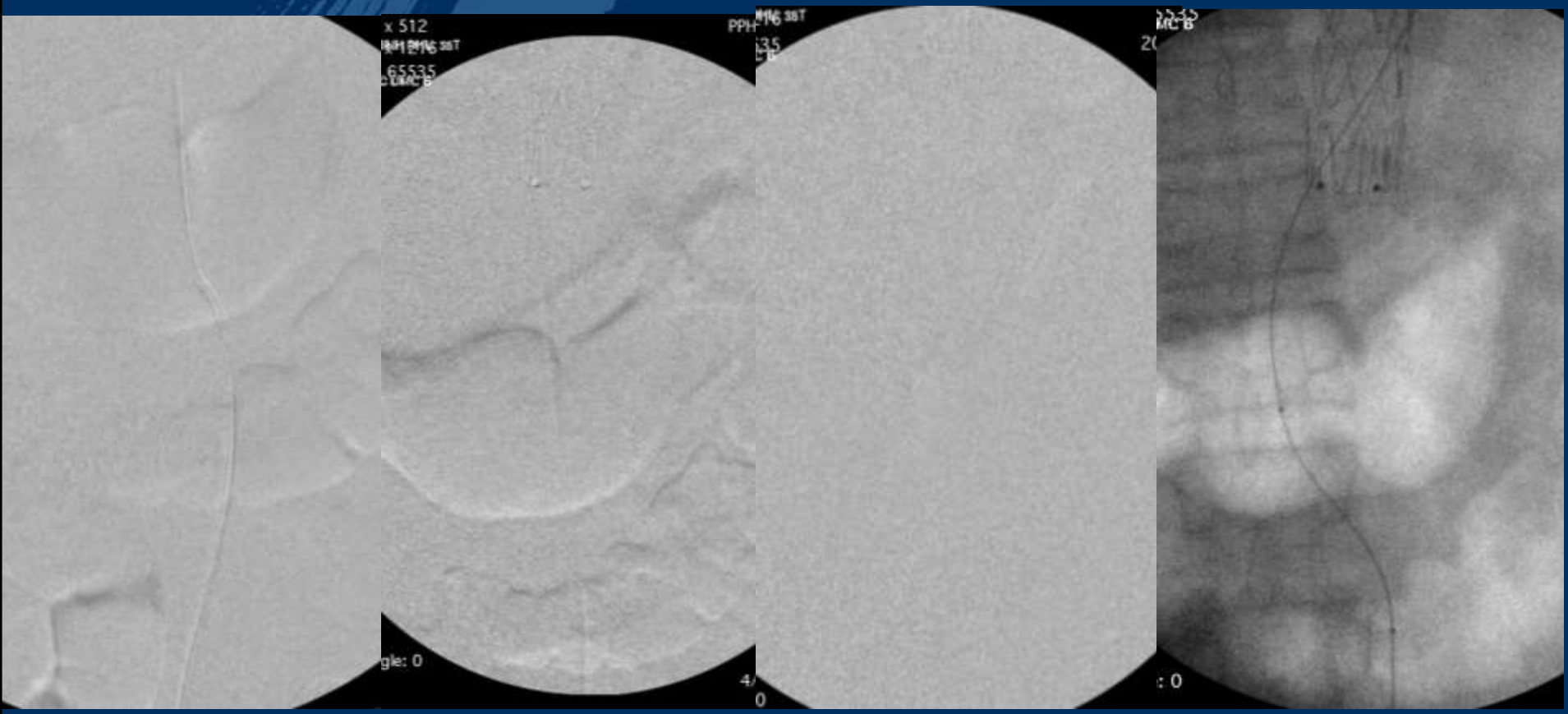
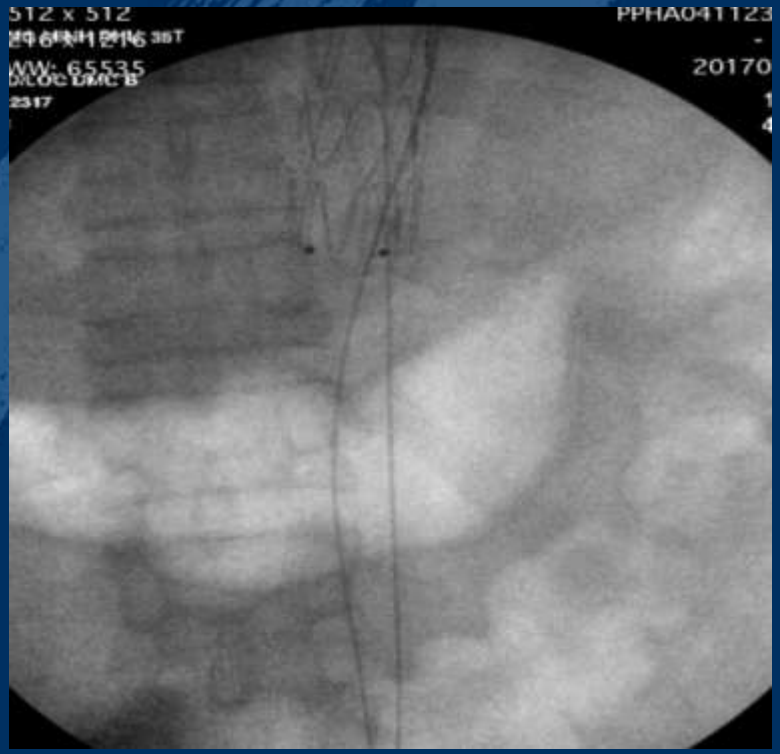
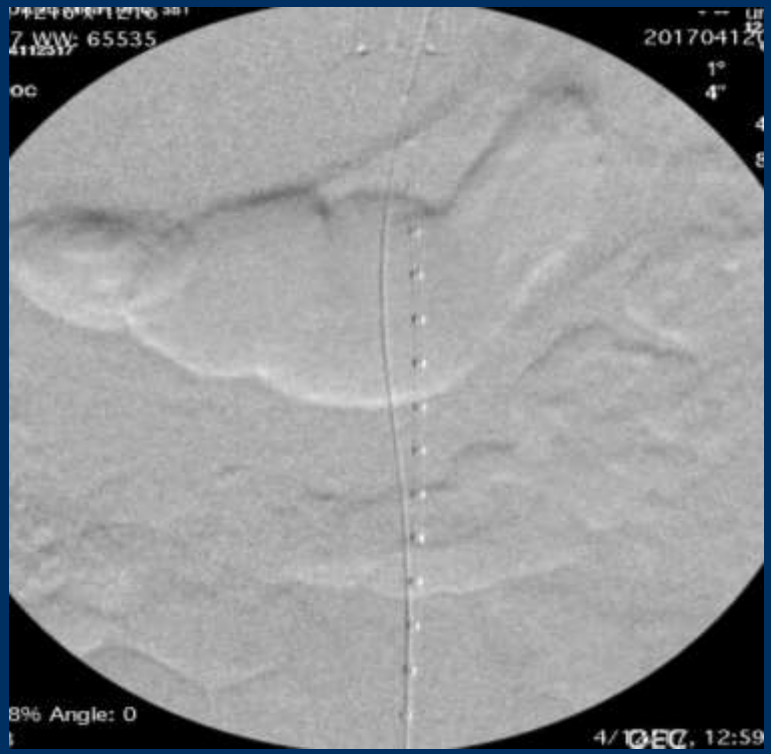


- **Step 7th**: Check angio → better result : Blood flow through " new fenestration" supplies to Right Renal A.





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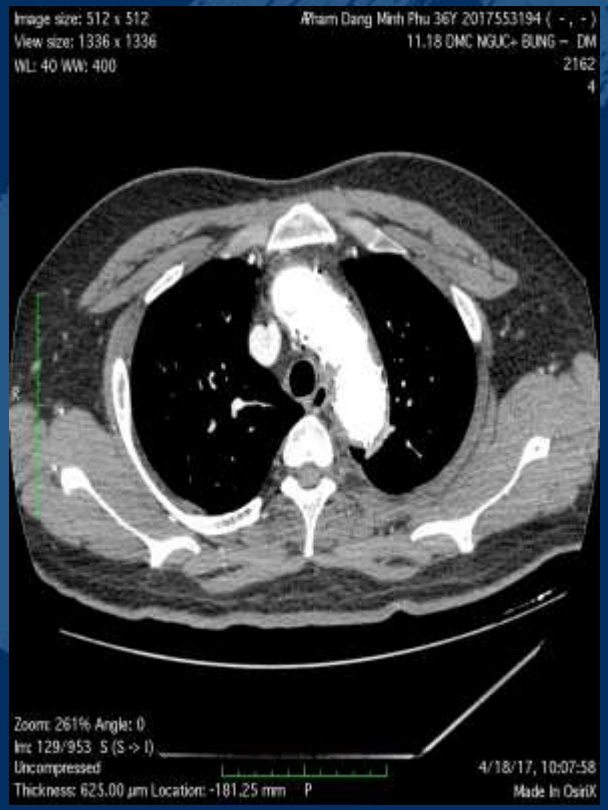
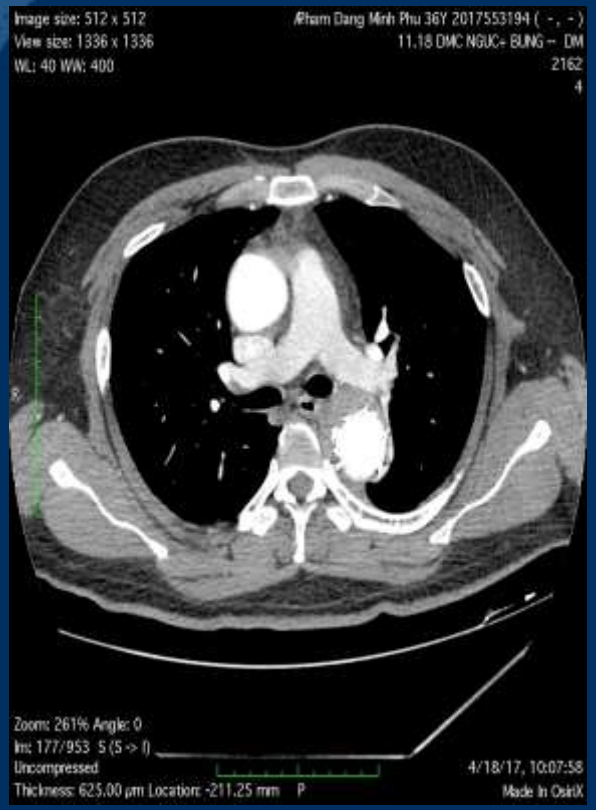
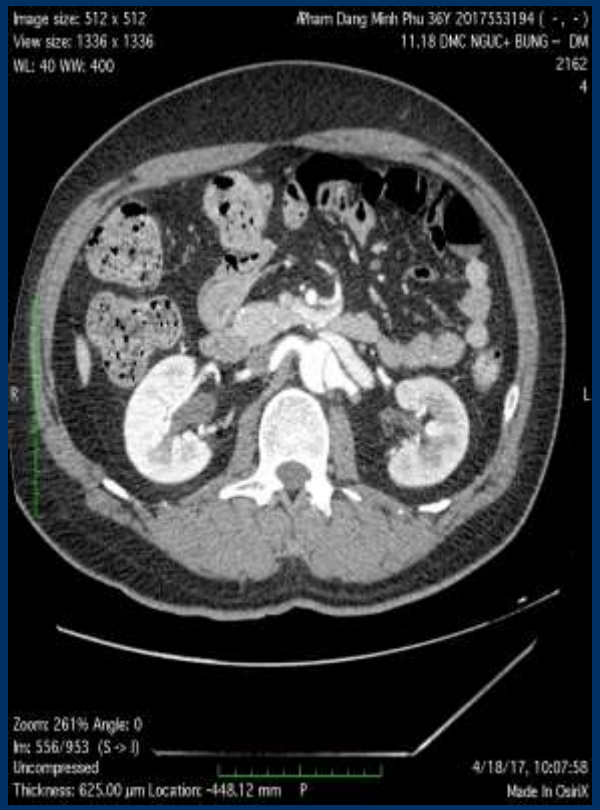
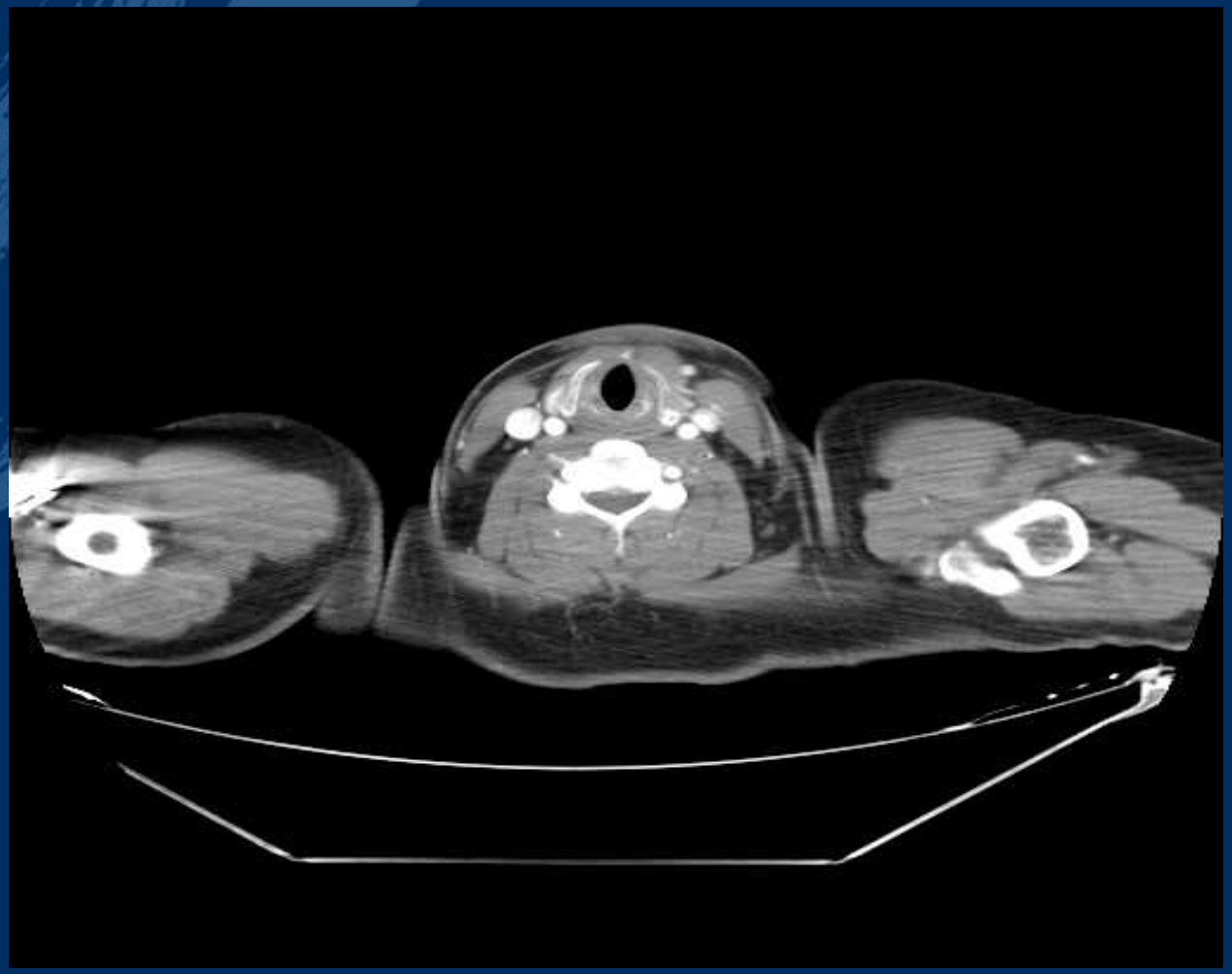
- Transfer Patient to ICU Dept.
- Remove Endotracheal tube after 6h without paraplegia , stroke.
- After 1 week, we check MS CT 64s:







- Result of MS CT 64s after 1 year:



II. Conclusion:

- ATBAD can occur in every ages and is challenge.
- Endovascular treatment for complicated aortic dissection and mal-perfusion syndrome was a safe procedure with good mid-term clinical outcomes.
- More clinical data and long term follow up are needed.

Thanks you!



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