

Hybrid procedure for Mal-perfusion Syndrome in Complicated Acute Type B Dissection in a young patient

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Disclosure

Speaker name: Dr. Tung Son, Nguyen

- ☐ I have the following potential conflicts of interest to report:
 - ☐ Receipt of grants/research support
 - ☐ Receipt of honoraria and travel support
 - ☐ Participation in a company-sponsored speaker bureau
 - ☐ Employment in industry
 - ☐ Shareholder in a healthcare company
 - ☐ Owner of a healthcare company
- ☒ I do not have any potential conflict of interest

TOPIC: Hybrid procedure for Mal-perfusion Syndrome in Complicated Acute Type B Dissection in a young patient

Non – disclosure.

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Member of Aortic Association.

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VIET DUC University Hospital

- Oldest modern hospital in Viet Nam (since 1906)
- Focus on surgical activities (more than 75,000 operations / year)
- Oldest Center of Cardiovascular and Thoracic Surgery in Viet Nam (since 1958)

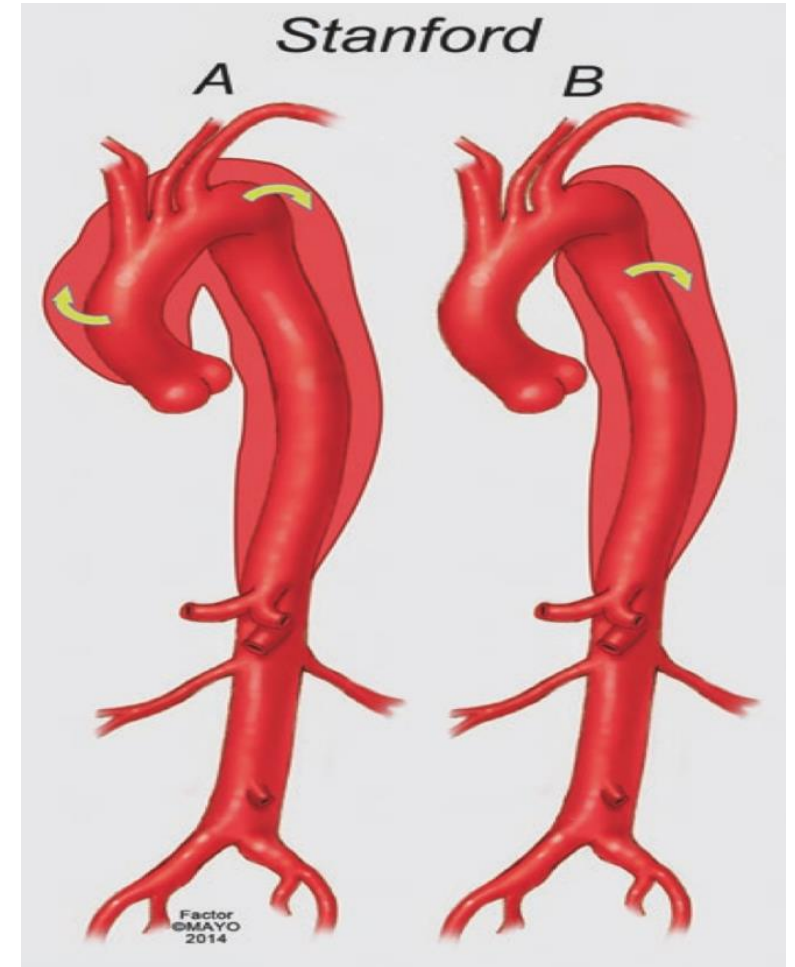


Hybrid Room from Viet-Duc University Hospital



I. Back ground

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

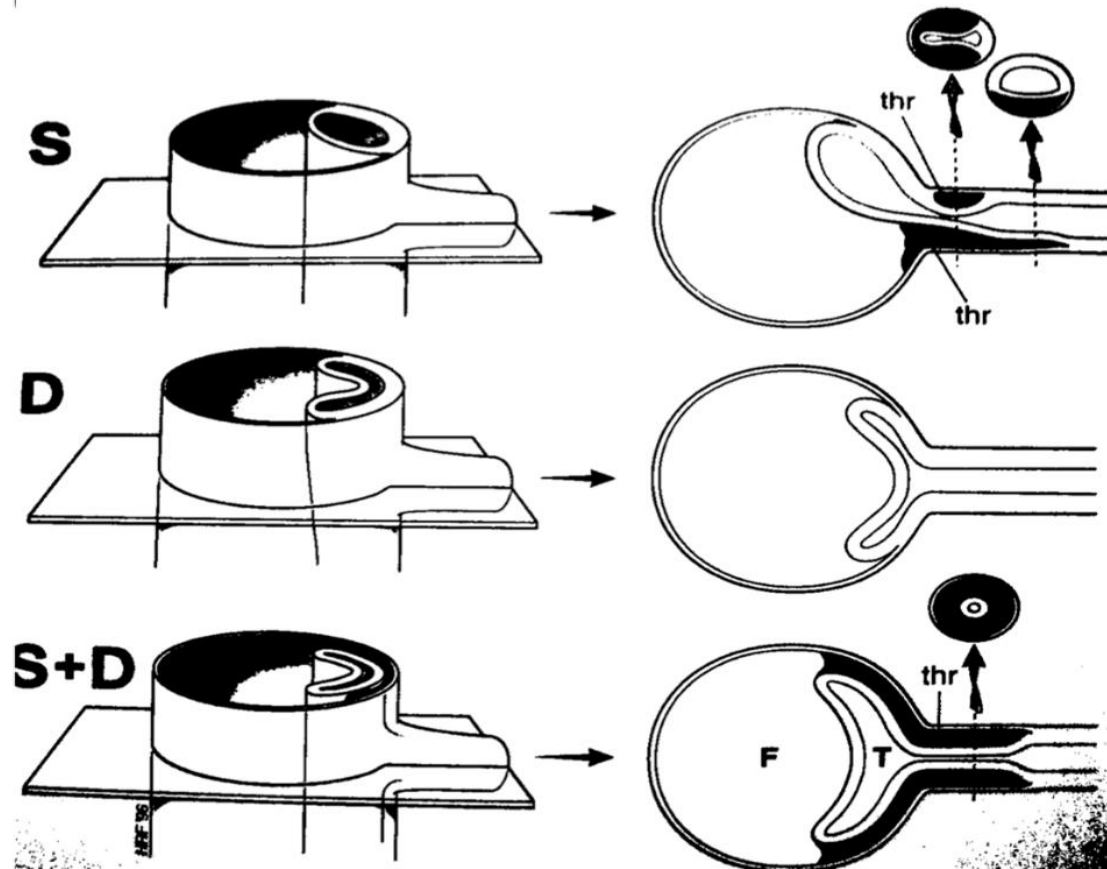


Stanford classification of aortic dissection

I. Back ground

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

I. Back ground

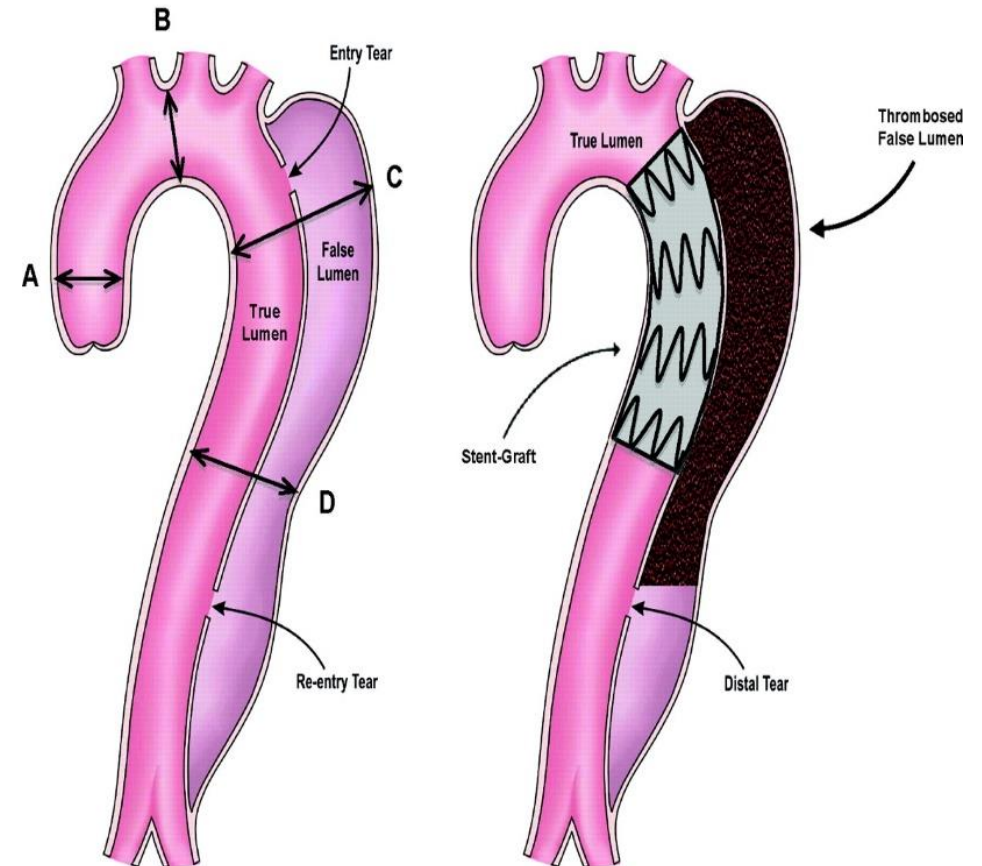


Williams et al. Radiology. 1997;203:37-44

I. Back ground

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

Endovascular Stent-graft in type B-Dissection

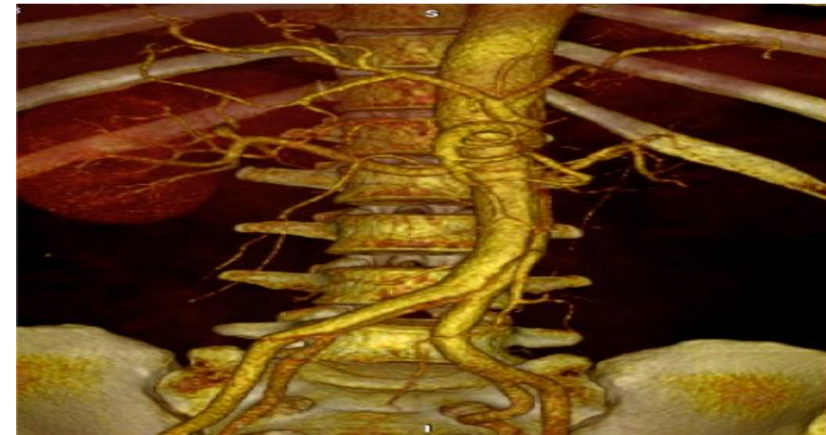
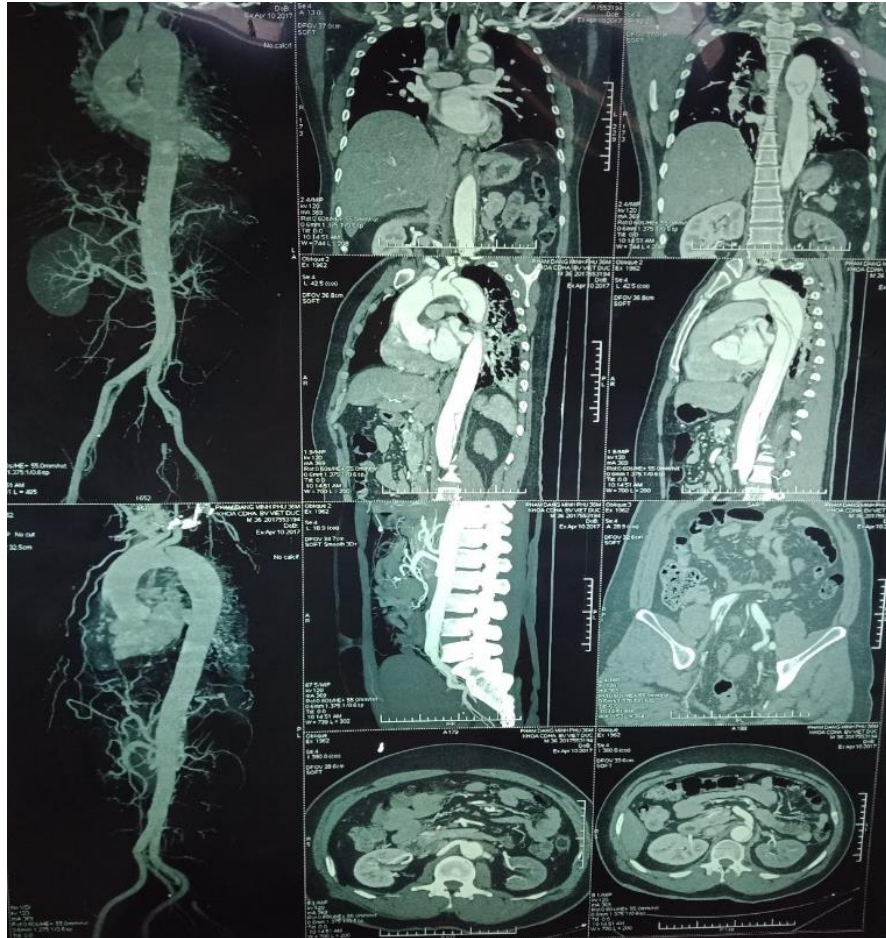


Medical report

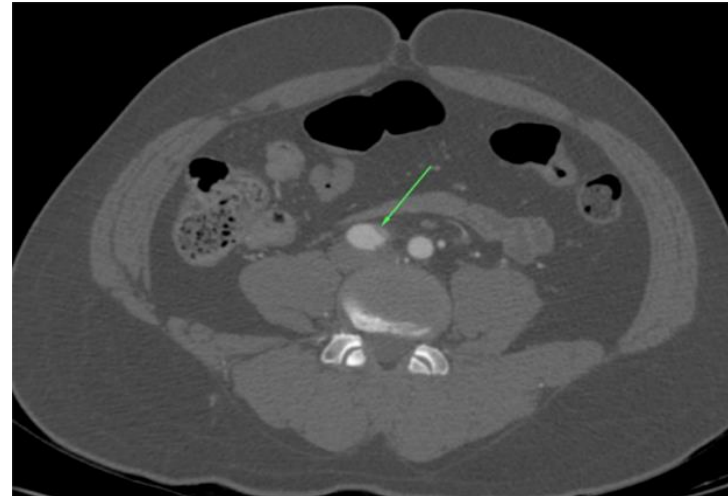
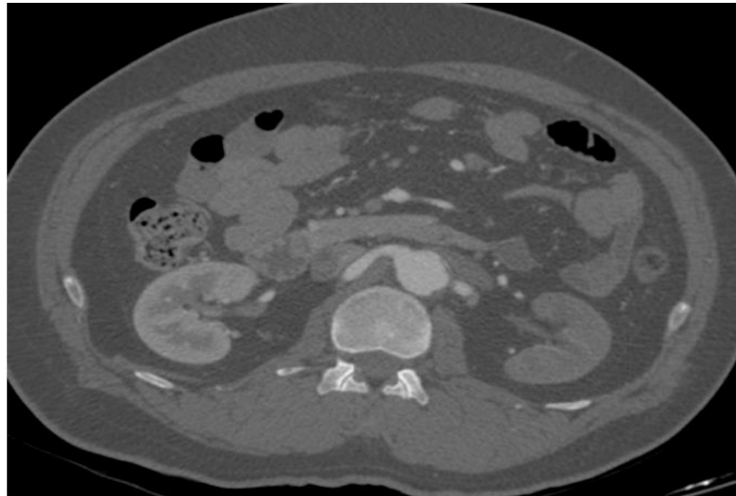
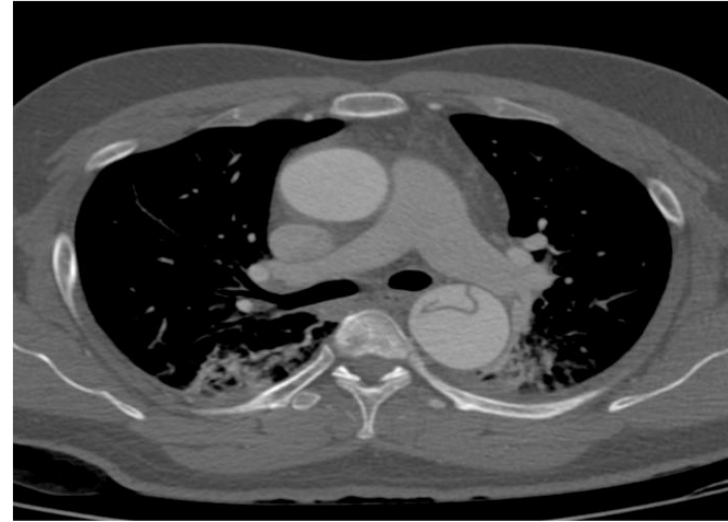
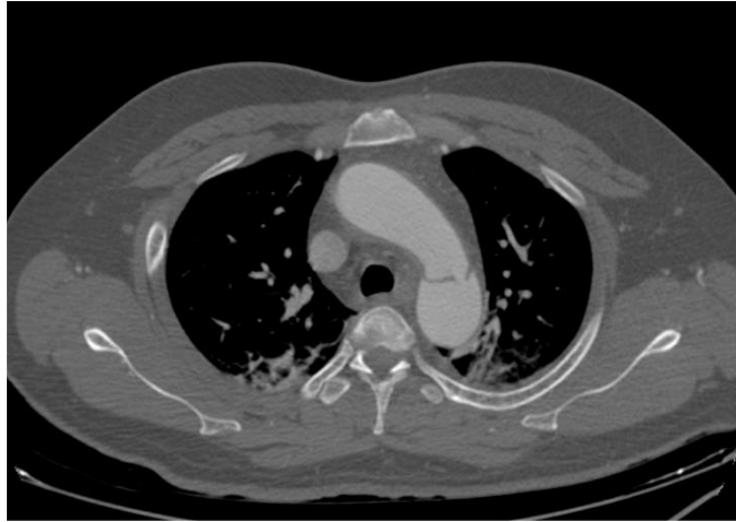
- **Gender:** Male.
- **Age:** 36 year-old
- **History:**
 - + Hypertension (3 years not controlled).
 - + Dyslipidemia
 - + Alcohol abuse and tobacco use.
 - + No DM. No family history.
- **Complain with :** **Dyspnea and acute chest pain.**
- **Clinical sign:** **Femoral A. : weak pulse.**
- **Ure/Creatinin:** **11.2/216**

Medical report

* MS-CT 64s:



Medical report



Medical report

What's your plan?

Medical report

- **General Anesthesia.**
- **Step 1st:** Exposure both side Femoral A. → Sheath 12F.
- + Percutaneous Radial access → Sheath 5F.
- **Step 2nd:** Right-Left Carotid A. Bypass.



Medical report

- **Step 3rd:**
- + Pigtail + Terumo wire through Left Femoral A. to True Lumen (TL)
- + Another Pigtail + Terumo through R-Radial A. to aAo to check angiography.



Medical report

- **Step 4th:** Change Stiff wire (Lunderquist-Cook) and advance the device (Valiant Thoracic) 30*30*200 and 30*26*150 – local above Celiac A.



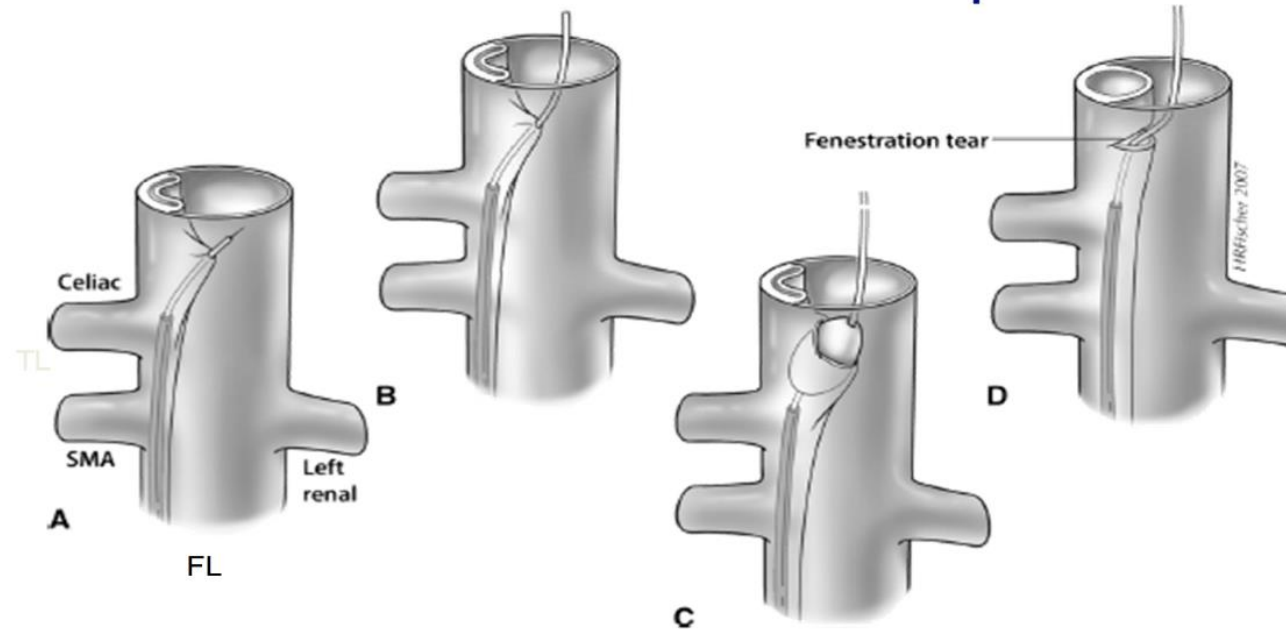
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- **Step 5th**: Check Angiography again: No Endo-leak, no re-flow, Celiac + SMA's flow good, Left Renal A.'s flow increase better but.....



- **Step 6th:** And the answer is Classical technique:
→ “Percutaneous Fenestration”

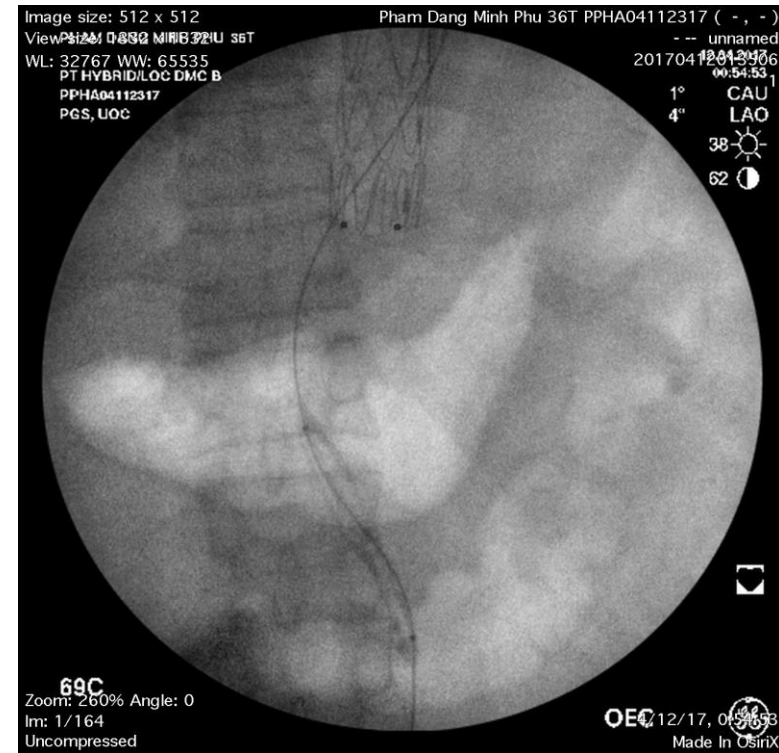
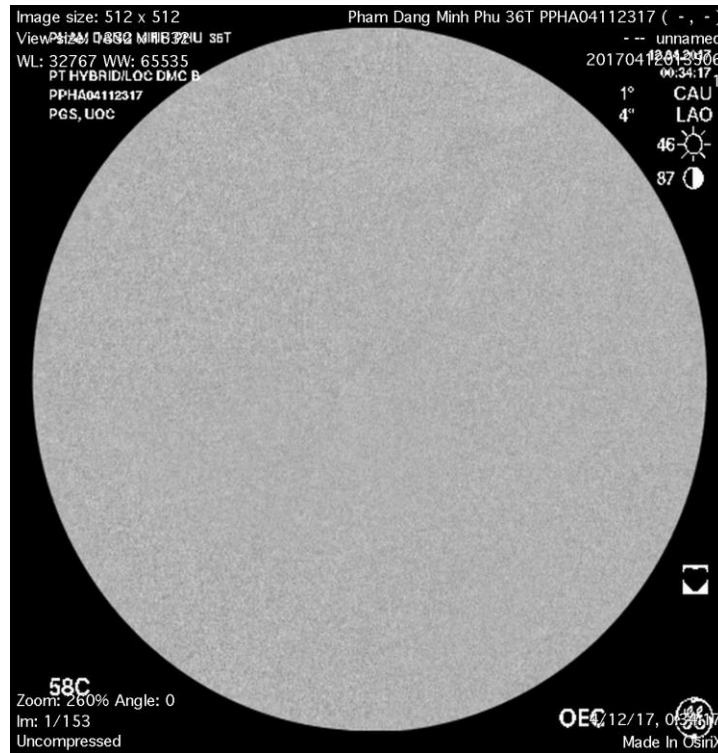
Classic Fenestration Technique



William and al, 2009

Medical report

- **Step 6th:** And the answer is Classical technique:
→ “Percutaneous Fenestration”



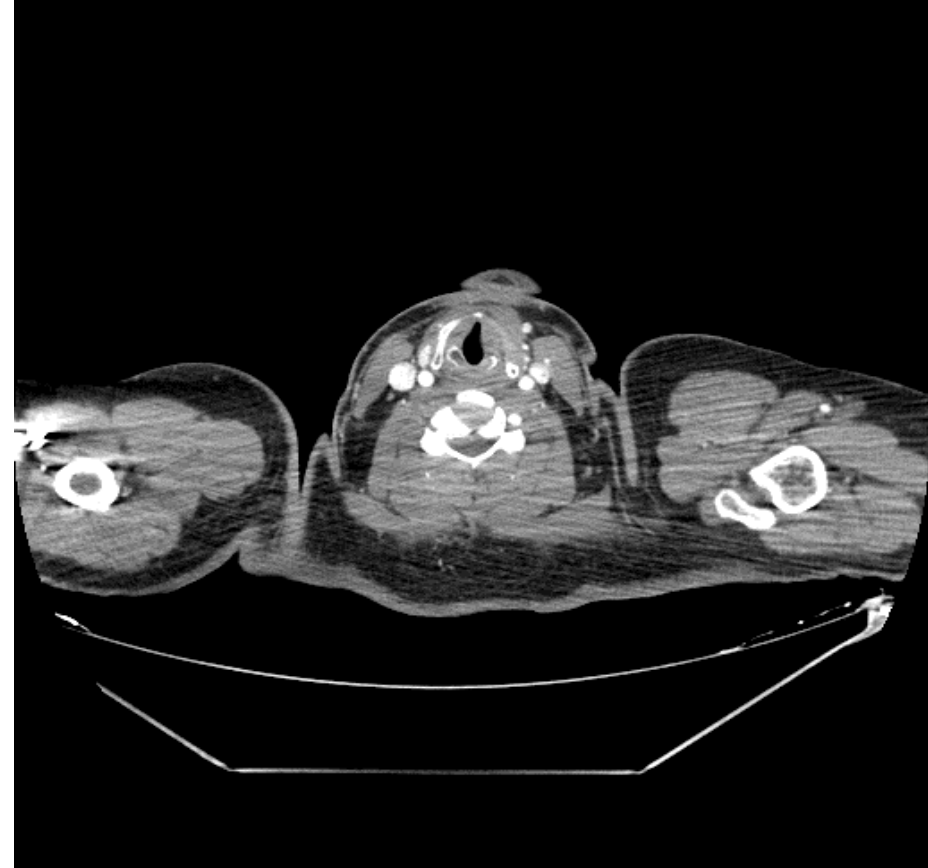
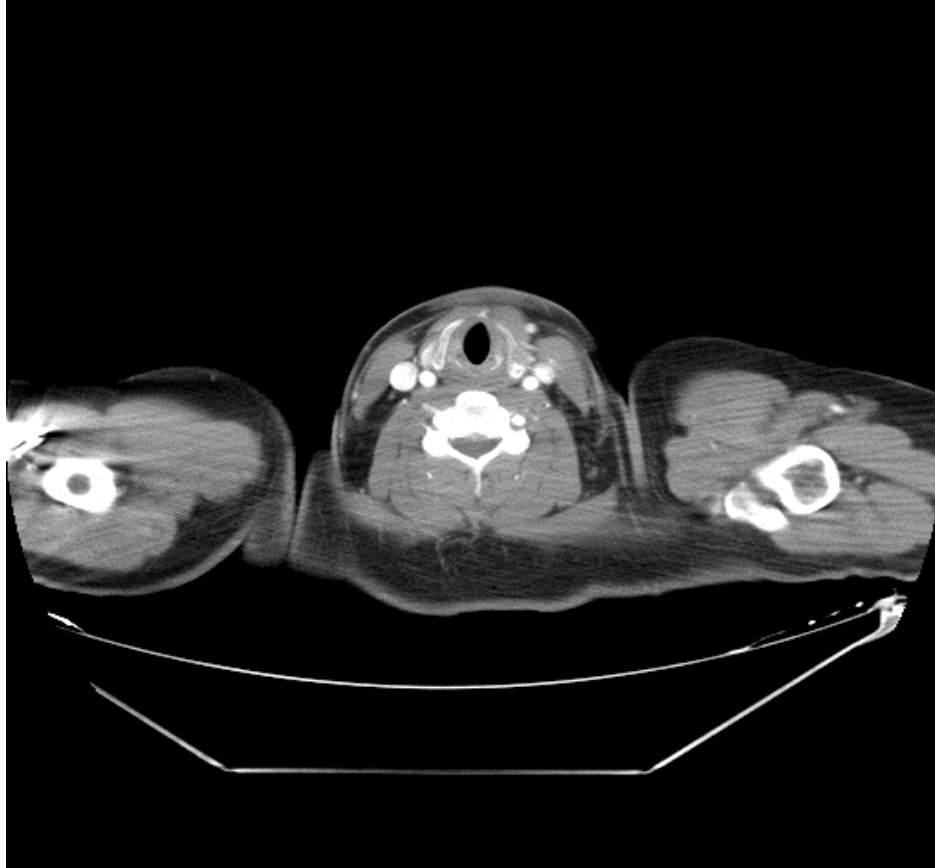
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- **Step 7th**: Check angiogram → better result : Blood flow through “ new fenestration” supplies to Right Renal A.



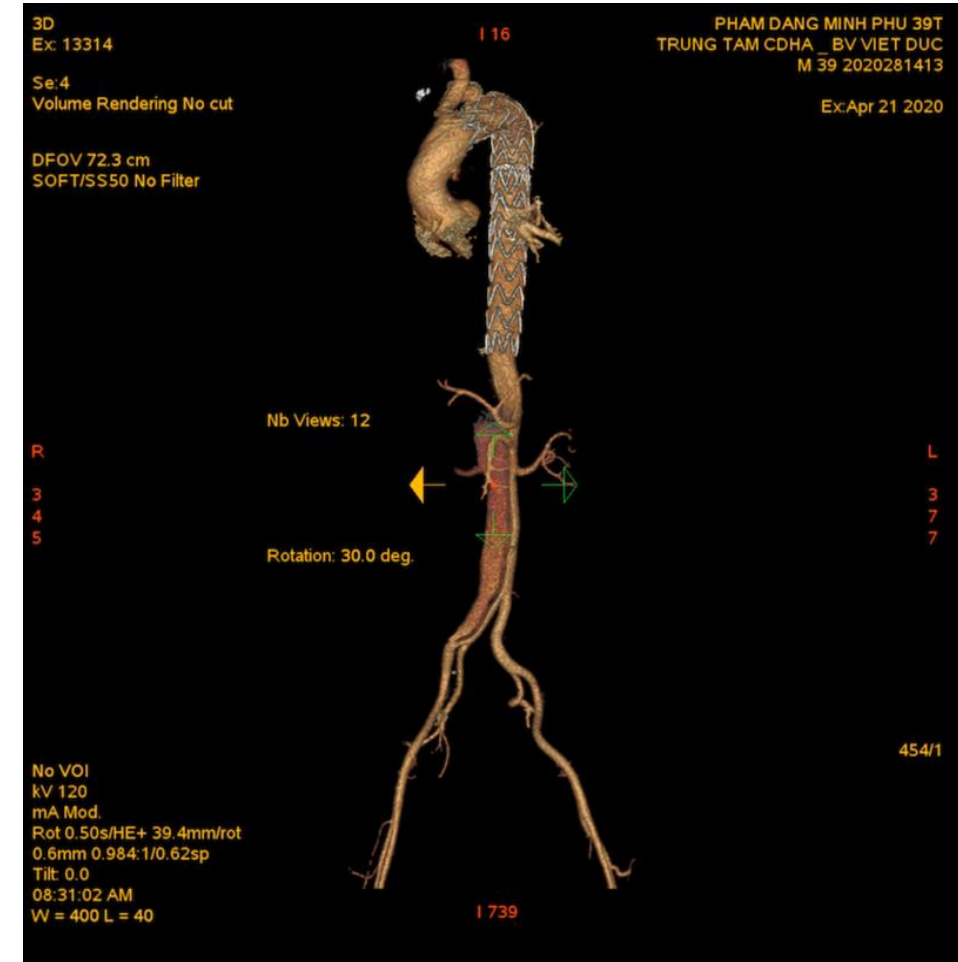
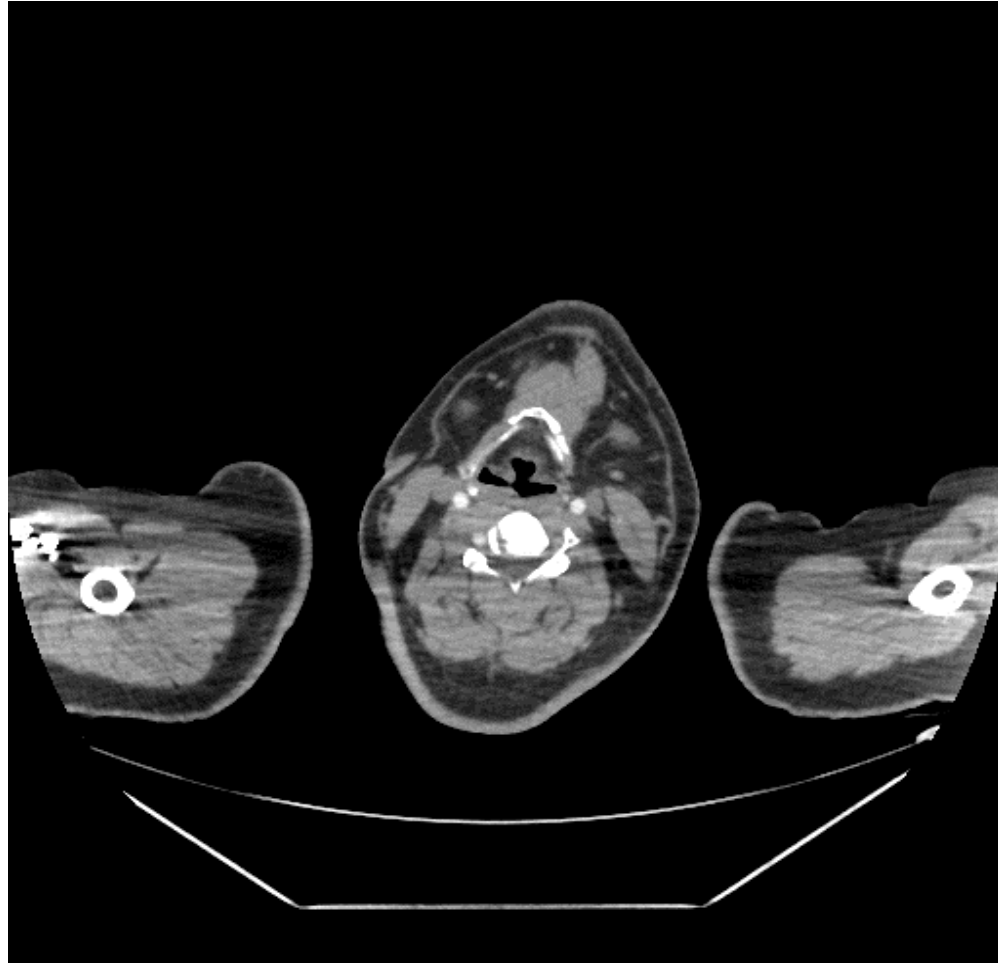
Medical report

- Result of MS CT 64s after 6 months



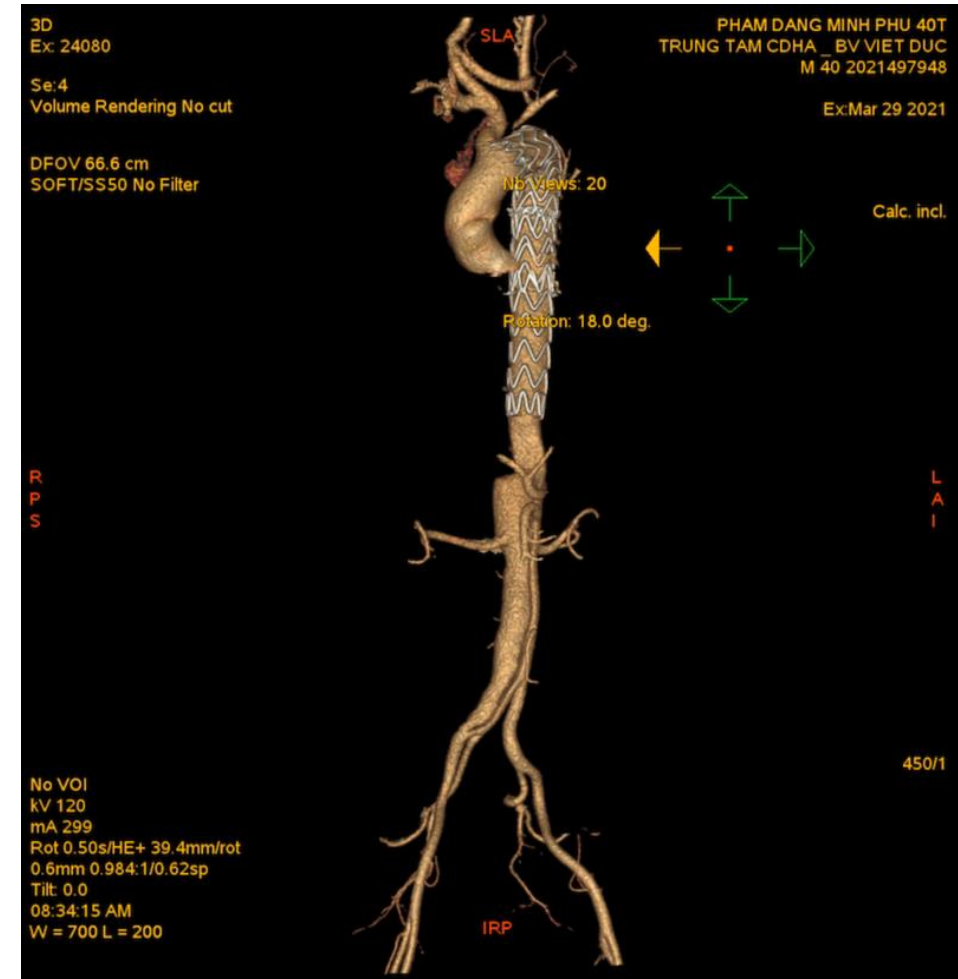
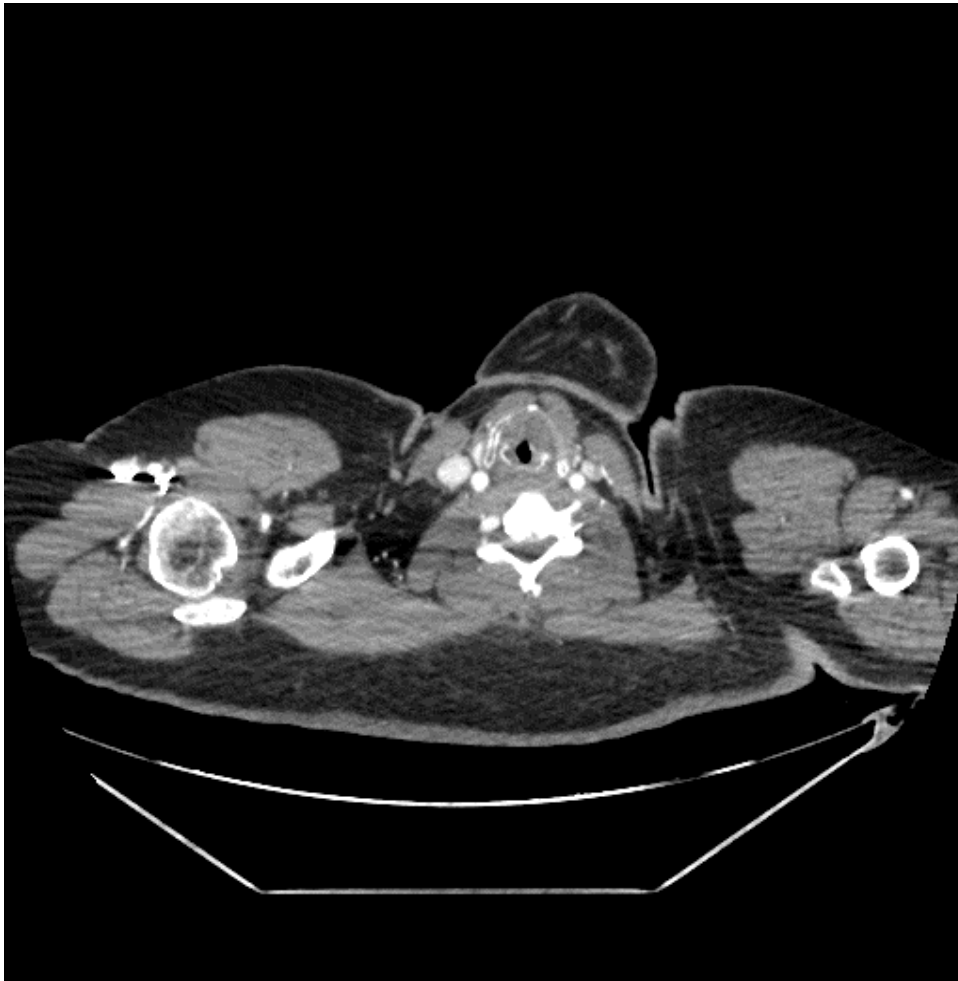
Medical report

- Result of MS CT 64s after 2 years



Medical report

- Result of MS CT 64s after 3 years



II. Conclusion

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

Thanks you!

