



PRELIMINARY OUTCOMES OF ACUTE TYPE A AORTIC DISSECTION SURGERY AT VIET DUC UNIVERSITY HOSPITAL DURING THE PERIOD 2018-2022

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EPIDEMIOLOGY

- In the USA There are about 2000 cases of aortic dissection per year or about 10/100.000 citizen per year, 2 deads/100.000 for men and 0,8 deads /100.000 for women caused by aortic dissection.
- In London (UK), 4,2% sudden dead in men caused by aortic dissection and complications du to aortic dissection are twice á common as abdominal aortic aneurysm rupture.
- In France new cases of aortic dissection is 1/100.000 citizen, number of surgeries of actue aortic dissection is 300 cases per year, in Italy - 4,4/100.000.
- In Japan this rate is equivalent to European countries.



DEFINITION AND MECHANISM OF ACUTE AORTIC DISSECTION

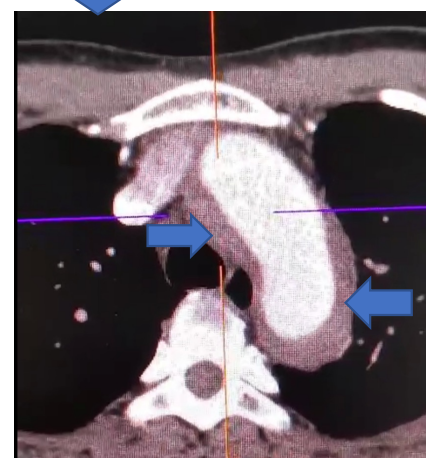
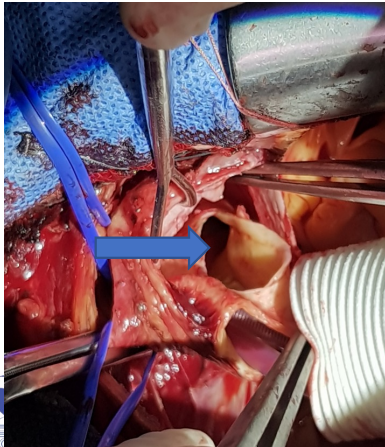
Aortic dissection is damage to the aortic medial layer with bleeding within and along the artery wall, causing the aortic coat layers to separate.



Intimal tear

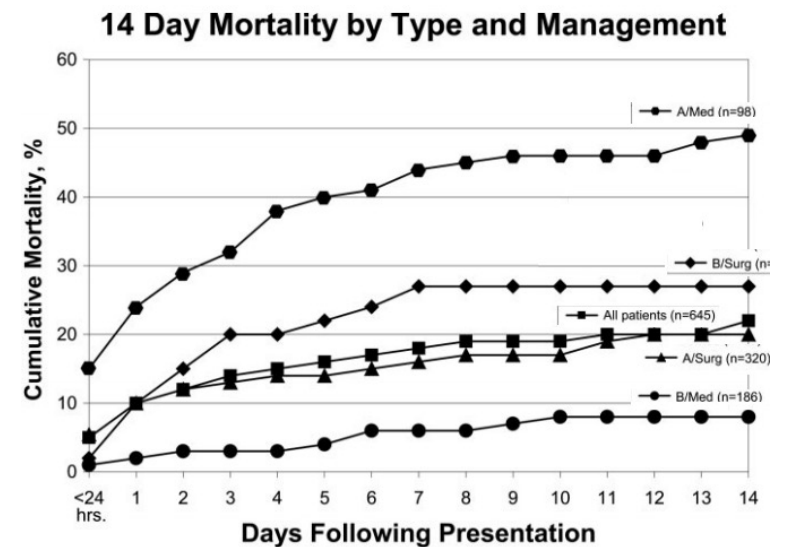
Rupture of vasa vasorum

Penetrating ulcer of aorta



PROGNOSIS

- Data from the largest registry of acute aortic dissection showed that in the absence of immediate surgical repair, medical management alone is associated with a mortality of nearly 24% by 24 hours after presentation, 29% by 48 hours, 44% by day 7, and 49% by 14 days. Even with surgical repair, in-hospital mortality rates are 10% by 24 hours, 12% by 48 hours, 16% by 7 days, and nearly 20% by 14 days ([Figure 3](#)). The most common causes of death are aortic rupture, stroke, visceral ischemia, cardiac tamponade, and circulatory failure.



Contemporary Reviews in Cardiovascular Medicine

Acute Aortic Syndromes

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(*Circulation*. 2005;112:3802-3813.)

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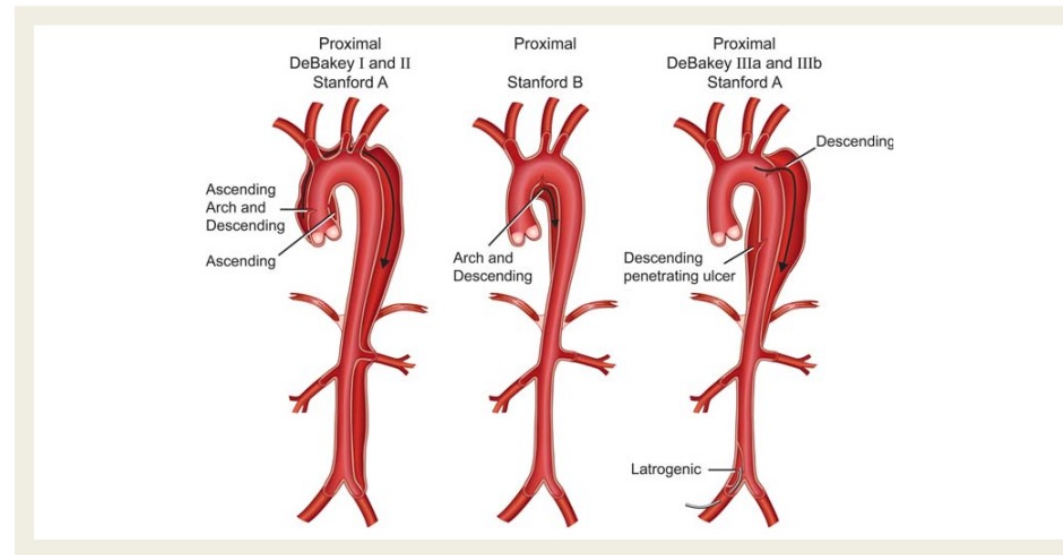
DOI: 10.1161/CIRCULATIONAHA.105.534198



CLASSIFICATION

By time:

- Super acute: < 24 hours.
- Acute : < 14 days.
- Subacute : 14 – 90 days.
- Chronic: > 90 days.



Results

From 1/2018 to 12/2022, there were 269 patients, underwent surgery for acute type A aortic dissection. The clinical and paraclinical parameters before surgery were:

Parameter		n	%
Age (years)		60,5 ± 12 (29 – 80)	
Sex	Male	199	74
	Female	70	26
Marfan syndrome		12	4.5
Arterial hypertension		235	87.4
Complications before surgery	Cerebrovascular shock	7	2.6
	Tamponade	20	7.4
	Limb ischemia	12	4.5
	Coronary artery damage	9	3.3



Bảng 2. Surgical procedures (N=269)



Surgical procedures	Number of patients	%
Ascending aorta replacement	130	48.33
Hemi-arch	36	13.38
Classic ascending aorta and aortic arch replacement	31	11.52
Ascending aorta replacement and total debranching	12	4.46
FET	40	14.87
Bentall	15	5.58
David	5	1.86
CABG	9	3.35

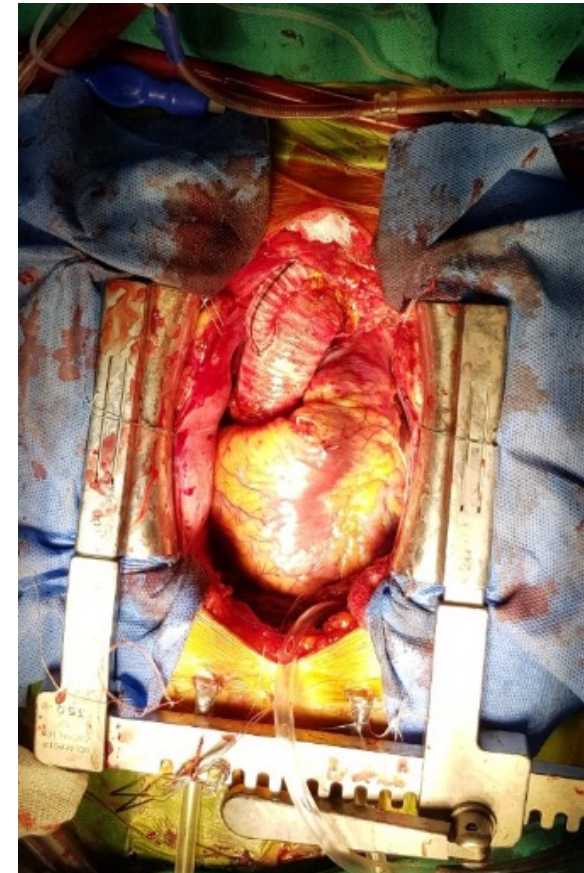
Table 3. Preliminary outcomes of surgery(N=269)

Features		Average
Ventilation time(day)		10.3 ± 24.1
ACU stay(day)		15.08 ± 10.79
Hospital stay (day)		20,72 ± 18.67
Tracheotomy		36 (13.6 %)
Early complications	Sternum infection	4 (1.5 %)
	Bleeding require reoperation	4 (1.5 %)
	ECMO	5 (1,8 %)
	Hemopericardium	3 (1.1%)
	Acute cholecystitis	1 (0.4 %)
	Rupture of AVM in abdomen	1 (0.4 %)
	Cerebrovascular shock	5 (1.8 %)
Hospital mortality		28 (10.4 %)



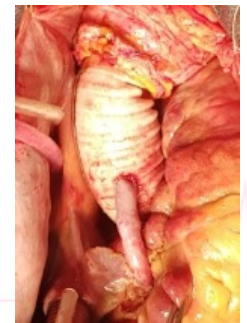
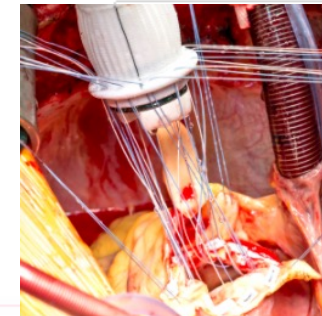
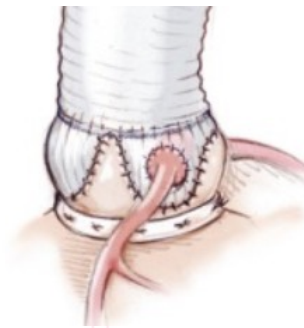
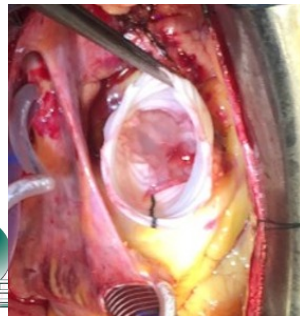
Table 4: Number of surgery and morbidity by years (N=269)

Year	N	Mortality	%
2018	42	5	11.90
2019	44	4	9.09
2020	71	8	11.27
2021	44	5	11.36
2022	68	6	8.82
Total	269	28	10.41



RELATIONSHIP BETWEEN SURGICAL METHOD AND MORTALITY

Surgical procedures	Number of patients	Mortality n	Mortality (%)
Ascending aorta replacement	130	11	8.46
Hemi-arch	36	5	13.89
Clasic ascending aorta and aortic arch replacemet	31	4	12.90
Ascending aorta replacement and total debranching	12	2	16.67
FET	40	2	5.00
Bentall	15	4	26.67
David	5	0	0.00
CABG	9	1	11.11

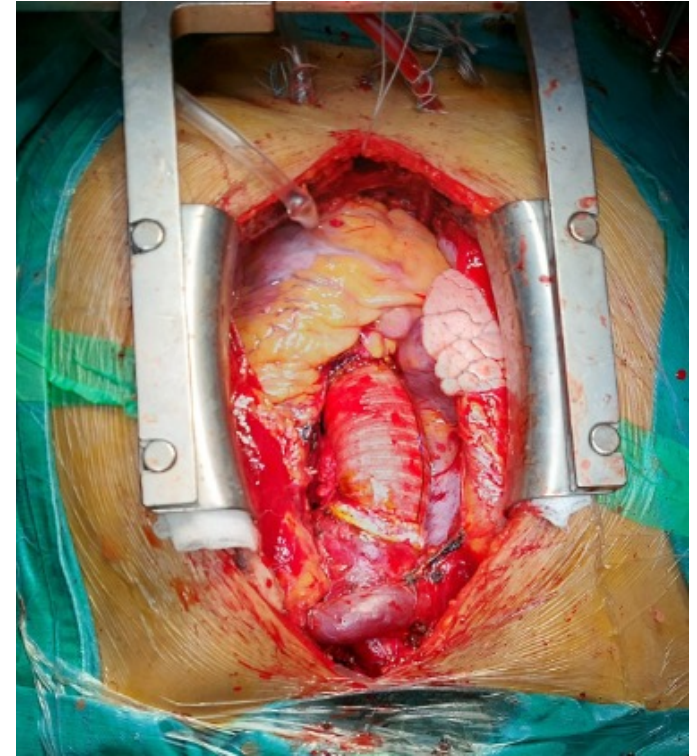
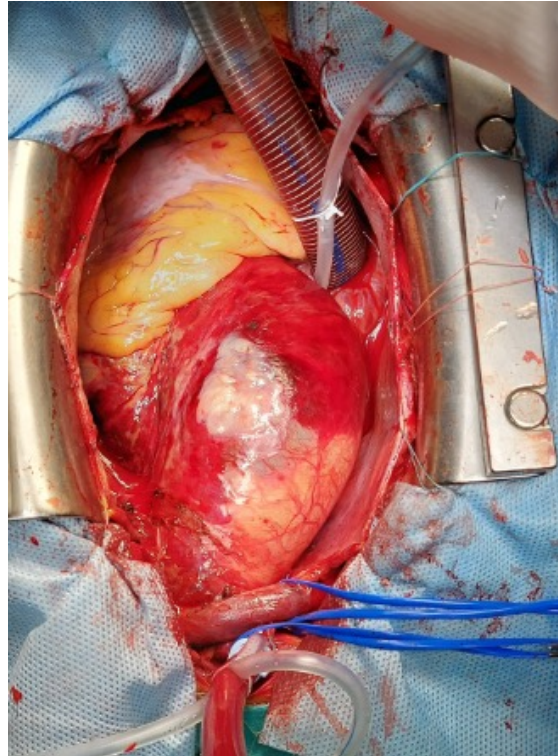
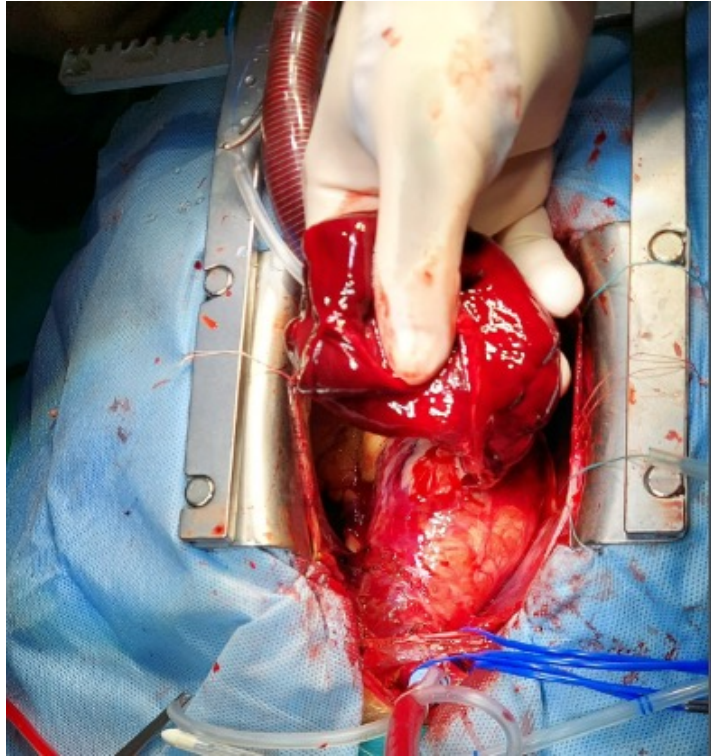


Causes of dead (N=22)

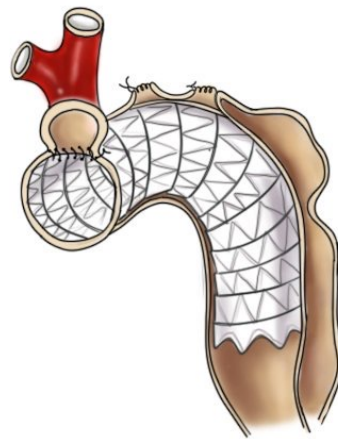
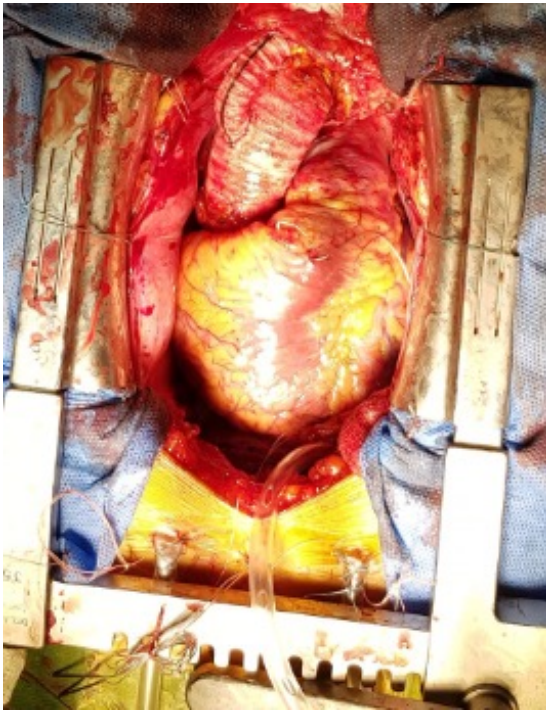
Causes	n	%
Multi-organ failure	10	35.71
Hospital infection	5	17.86
Coma	5	17.86
Intestine ischemia	3	10.71
Rupture of descending aorta	4	14.29
unknown	1	3.57
Total	28	100.00



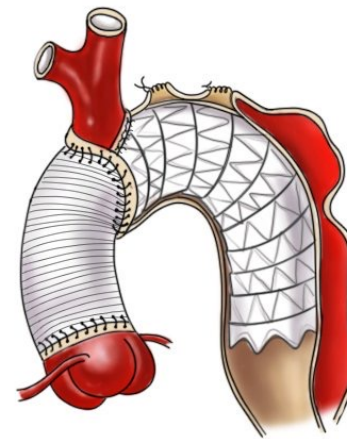
ASCENDING AORTA REPLACEMENT



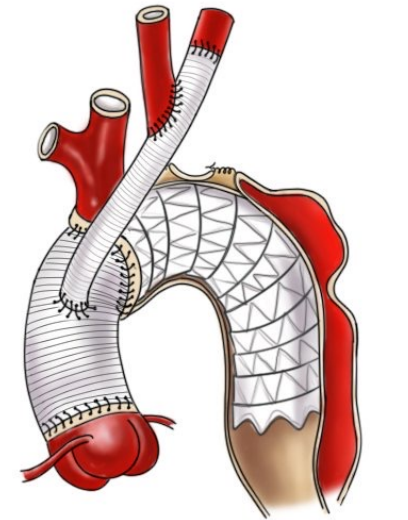
Modification of FET



A.



B.



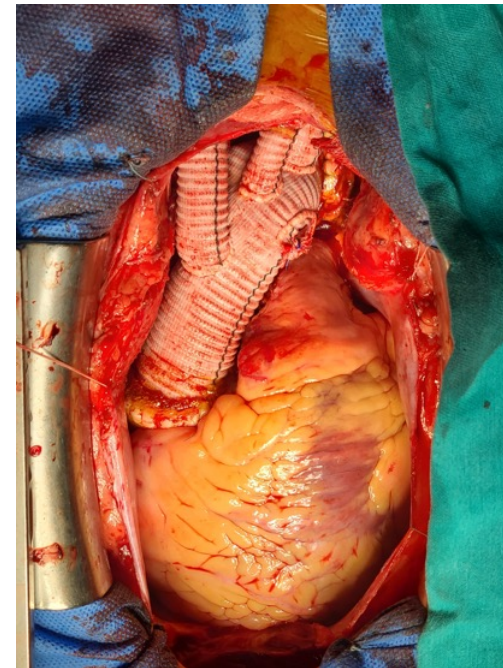
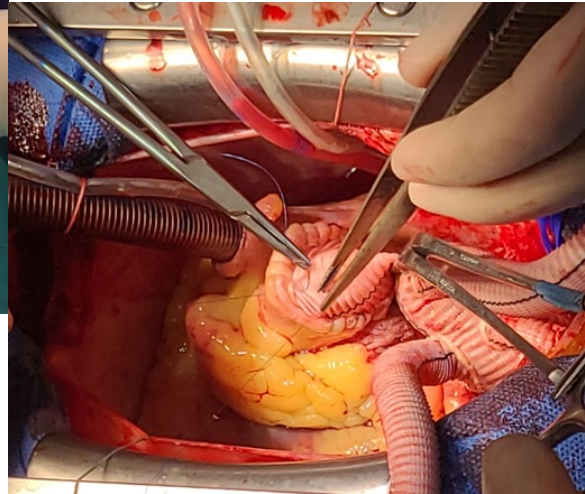
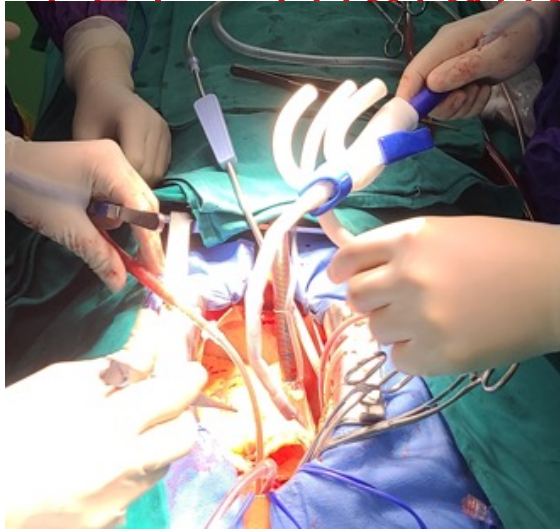
C.

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MSCT BEFORE AND AFTER SURGERY



FET - Thoraflex





CONCLUSION

- Acute type A aortic dissection is a serious disease with high mortality and postoperative complications despite many advances in both diagnosis and surgical treatment.
- Viet Duc Hospital has successfully applied diverse surgical methods to treat this pathology with early results that are relatively positive.





Thank you
for your attention

