

Contemporary Surgical Outcomes of Acute Type A Aortic Dissection in a Single Center

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Objective

- The use of a frozen elephant trunk has been reported to improve the long-term outcomes of acute type A aortic dissection.
 - We are based on the tear-oriented strategy and use the frozen elephant trunk selectively.
 - The aim of this study was to review the early and late outcomes of surgical treatment for acute type A aortic dissection in our hospital.
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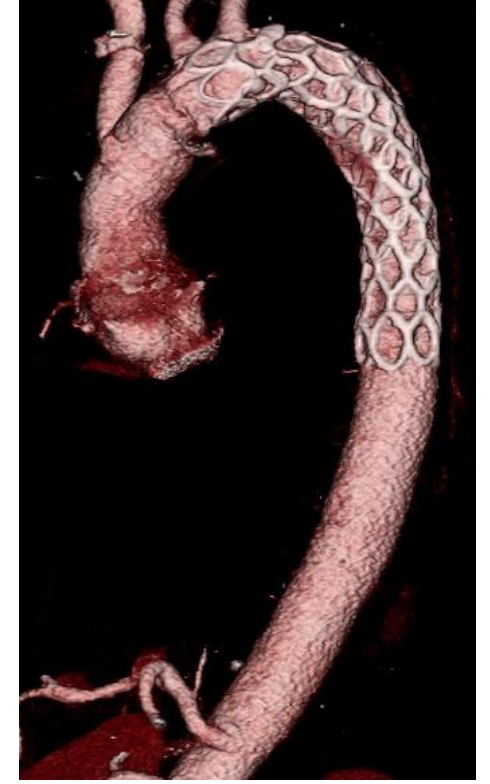
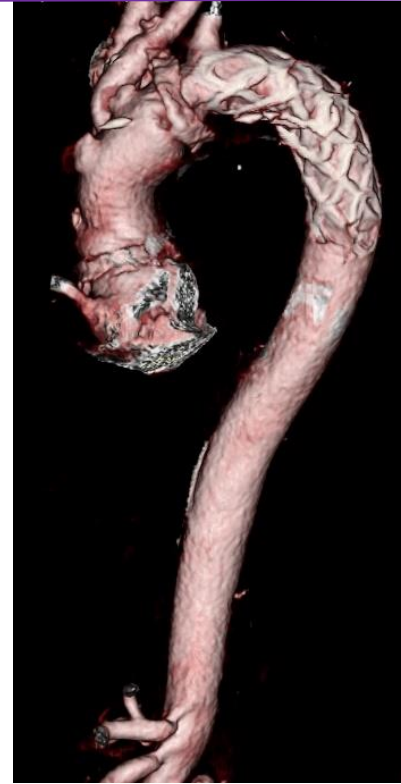
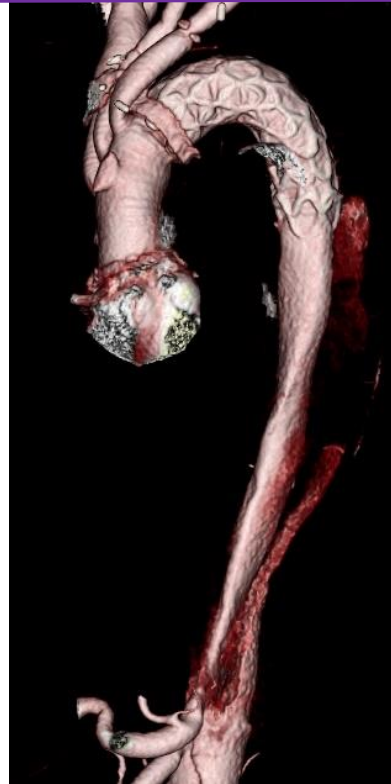
Methods

- 142 patients who underwent emergent surgery for acute type A aortic dissection from January 2010 to November 2023 were included in this study.
- Patient characteristics and surgical outcomes were retrospectively evaluated.
- The median observation period was 77 months (0.2 - 170).

Treatment Strategy

- Tear-oriented aortic replacement
- Selective antegrade cerebral perfusion under moderate hypothermia
- Bioglue to reapproximate dissection with internal Dacron strip and external Teflon felt
- Frozen elephant trunk for younger patients and those with dynamic malperfusion of the lower torso since November 2017

Frozen Elephant Trunk



Distal anastomosis
Fenestration
N

Zone 2
No
17

Zone 2
Lt. SCA
3

Zone 1
Lt. SCA
2

Zone 1
Lt. CCA/SCA
6

Patient Characteristics

	N=142
Age	68 ± 13 (range 32-91)
Male	73 (51%)
Transfer	111 (78%)
Classical dissection	114 (89%)
Cardiac tamponade	32 (23%)
Malperfusion	44 (31%) Coronary 5, Brain 16, Mesenteric 3, Renal 7, Lower limb 20
Preoperative CPR*	7 (5)%

*Cardiopulmonary resuscitation

Procedures

	n=142
Ascending or Hemiarch + Root	54 5
Partial arch* + Root	36 1
Total arch + Root	24 7
Frozen ET	28

*One or 2 separate tube grafts for arch vessel reconstruction

Outcomes

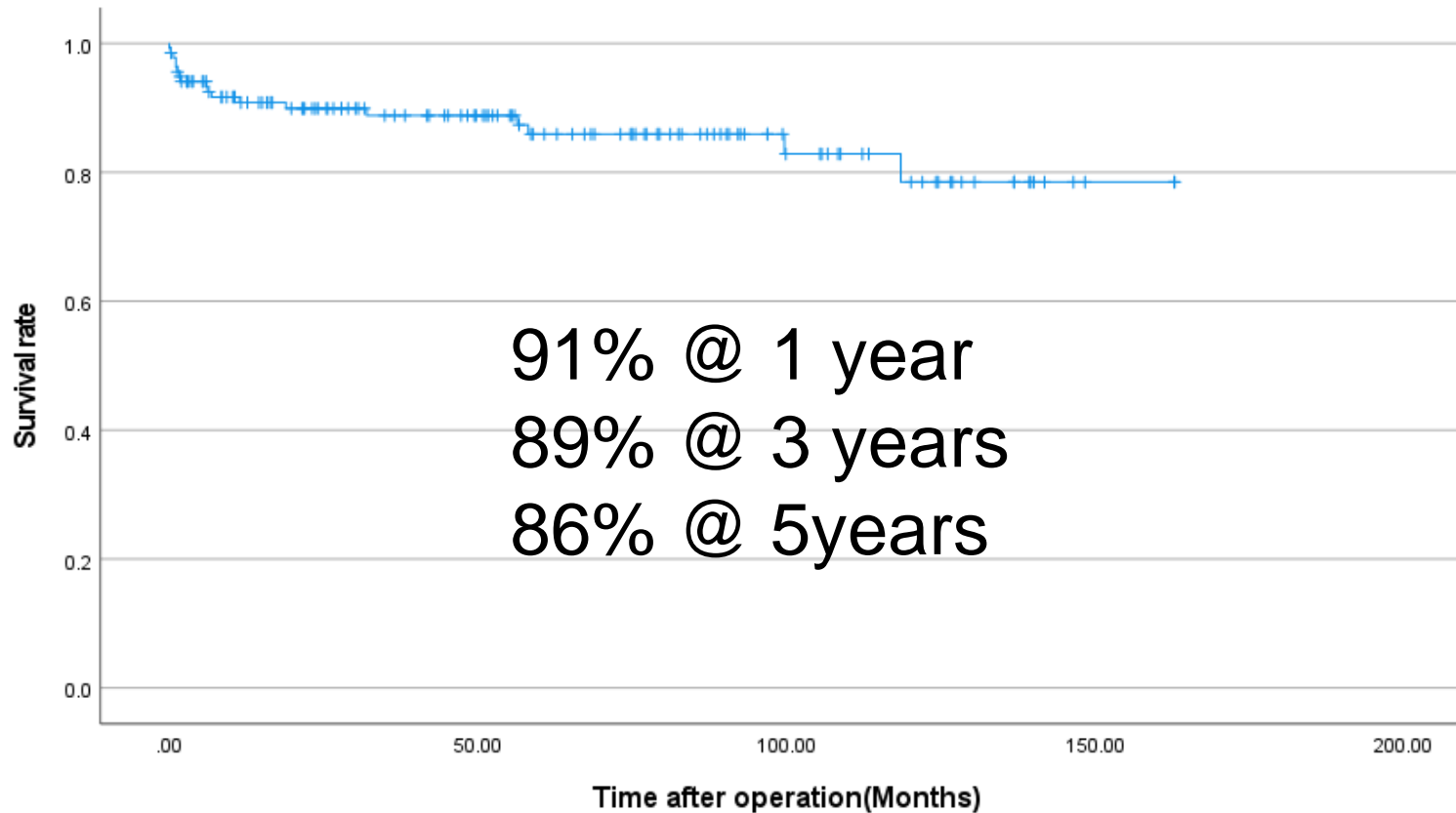
- Hospital mortality 4.2 % (6/142)

Independent predictor: Preoperative CPR

(Hazard ratio = 13.1, 95% CI = 1.92-89.1, p=0.009)

- Hospital stay (median) 23 days

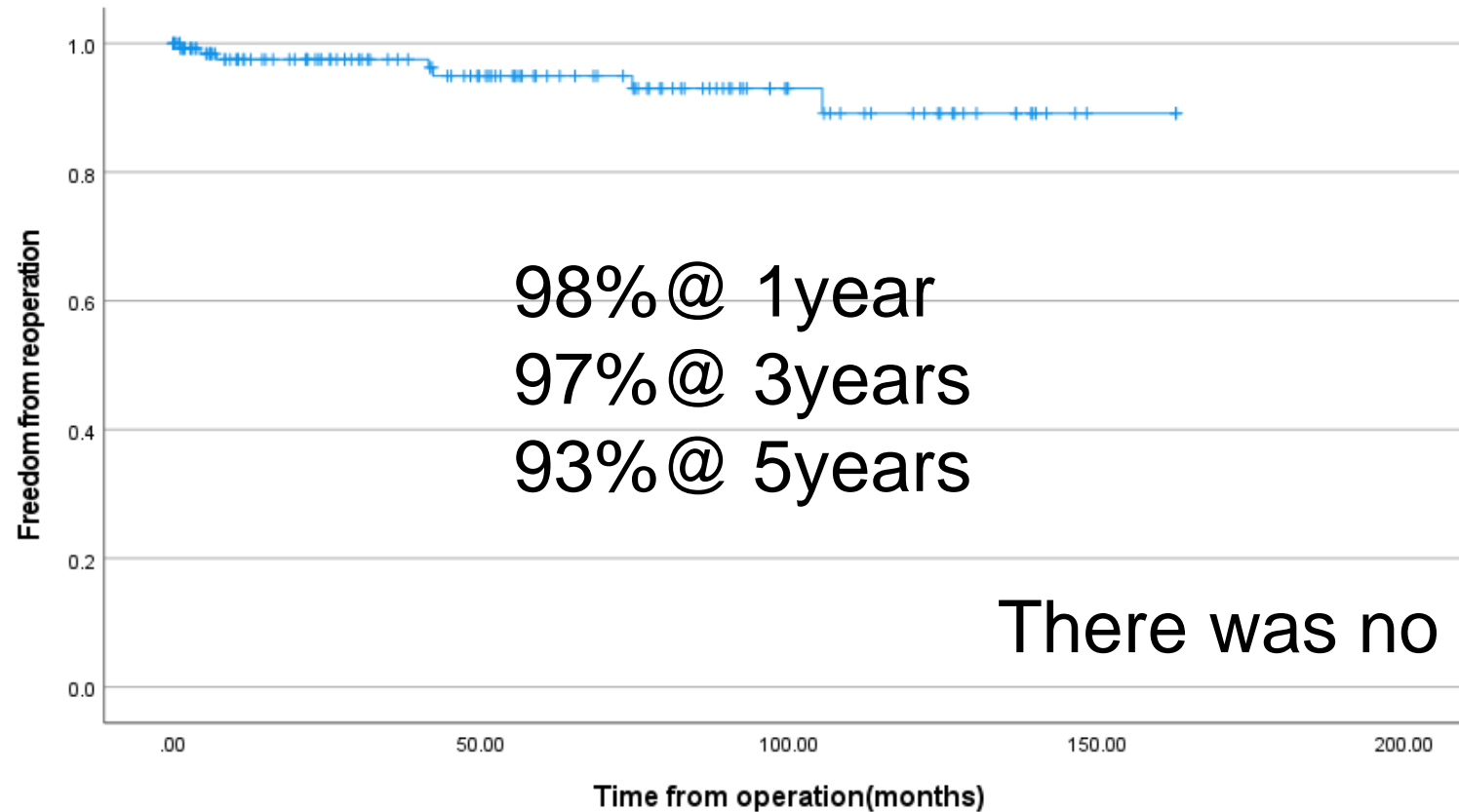
Survival



91% @ 1 year
89% @ 3 years
86% @ 5 years

Late death 13
(Aorta-related 4)

Freedom From Reoperation



There was no mortality after reoperation.

Conclusions

- Contemporary early and long-term surgical outcomes of acute type A aortic dissection were excellent.
- Our tear-oriented strategy and selective use of the frozen elephant trunk seem justified.