A dedicated surgical team for acute type-A aortic dissection repair: its impact on patient and surgeon

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Background

- Inverse relationship between operative volume and outcome is shown in many surgical procedures
- Surgery for acute type-A aortic dissection is mostly performed by non-dedicated surgeons
    - often due logistic reasons as on-call frequency

Background

- From January 2020, we adopted a tight dedication trial for ATAAD surgery;
- Preferably ATAAD surgery was performed by two young, albeit experienced, aortic surgeons, supervised by a senior when deemed necessary.

Objective

- We aimed to study early surgical outcome of the patients as well as the experienced work-life balance impact of the surgeons
- Retrospective cohort study
- Single high volume thoracic aortic center

Results

- Since January 2020, a total of 53 ATAAD patients were operated by the two dedicated surgeons
- Mean age 62 $\pm$ 11 years
- 72% were males (n=38)

Results

PROXIMAL REPAIR	% (n)
Composite root replacement	42% (n=22)
Resuspension/root reconstruction	58% (n=31)

DISTAL REPAIR	% (n)
Hemi-arch	64% (n=34)
Zone 1 arch replacement	4% (n=2)
Zone 2 arch replacement	24% (n=13)
Total arch replacement	4% (n=2)
Frozen ET implantation	4% (n=2)

Results

CPB time	261 ± 81 min
Cross clamp time	160 ± 49 min
Femoral cannulation	81% (n=43)
Right axillary cannulation	8% (n=4)
Direct aortic cannulation	11% (n=6)

Results

- No operative mortality was observed
- Only one in-hospital mortality occured (1.8%)
  - on post-operative day +16 due to late vein graft thrombosis in a patient who experienced iatrogenic ATAAD after PCI of the left mainstem in whom the left coronary ostium had to be sacrificed and the left coronary territory grafted

Results

Re-exploration	15% (n=8)
New stroke	8% (n=4)
Paraplegia	0% (n=0)
Temporary Renal function replacement therapy	4% (n=2)
Long-term dialysis	0% (n=0)

Results

Despite the **positive motivation** to maintain the effort given the obtained surgical results, both surgeons experienced an **undesirable high burden** of the dedicated on-call frequency to their work-life balance during the investigated period, resulting in early termination of this tight dedication trial.

Conclusion

Very **favorable** results of extensive, complex ATAAD repair are observed in this limited cohort of patient operated by two **dedicated aortic surgeons** only.

However, both surgeons experienced an **undesirably high burden** of the on-call frequency to their work-life balance.

Conclusion

It is conceivable that optimal care for ATAAD lies between the two extremes of generalized and highly specialized surgical teams to be maintained sustainable.

One of the potential solutions may be cooperation within regional networks, aiming at providing the best surgical care for our patients and sustainability for our surgical teams.