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The impact of COVID-19 pandemic on type A aortic dissection care

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Introduction: COVID-19 created a challenging situation for cardiac surgery and associated acute care programs around the world. While non-urgent cases might be postponed, operating on life-threatening conditions, including type A aortic dissection (TAAD), must be sustained despite the ongoing pandemic. Therefore, we investigated the impact of the COVID-19 pandemic on our urgent aortic program.

Methods: 36 individuals presenting with TAAD in a single centre were analysed from the pre-pandemic period (2019, n=16) and the pandemic era (2020, n=20). Retrospective data review was conducted on patient characteristics, TAAD presenting symptoms, operative techniques, postoperative outcomes and length of stay. A comparison was made between both eras applying appropriate testing methods, and a p-value <0.05 was considered statistically significant.

Results: A 25% increase in TAAD referrals occurred during the pandemic era. Patients were featured by younger age of presentation in contrast to Western data (pre-pandemic group: 47.6 ± 18.7, and the pandemic group: 50.6 ± 16.2 years, p=0.6) but showed similar male predominance (4:1) in both groups. There was no statistical difference in baseline comorbidities between the groups. Length of hospital and intensive care unit stays were comparable between both groups. Low rates of postoperative complications were registered in both groups with no significant between-group difference.

Conclusion: Emergent surgical management remains essential in patients with TAAD regardless of the pandemic. Furthermore, temporary structural departmental re-configuration and optimal personal protective equipment utilisation warrant maintained satisfactory outcomes in such critical healthcare scenarios.

Baseline clinical characteristics and outcomes of TAAD patients

Variable	Pre-Pandemic group (n=16)	Pandemic group (n=20)	P-Value
Age (years)	47.6 ± 18.7	50.6 ± 16.2	0.6
Male gender	81.2% (13)	85% (17)	0.7
Body mass index (kg/m^2)	31.6 ±10.2	30.8 ±8.7	0.8
Hypertension	68.8% (11)	75% (15)	0.7
Diabetes	6.2% (1)	10% (2)	0.7
Smokers	37.5% (6)	55% (11)	0.3
Presentation			
Chest pain	62.5% (10)	60% (12)	0.9
Syncope	25% (4)	5% (1)	0.1
Back pain	12.5% (2)	15% (3)	0.8
Abdominal pain	6.2% (1)	20% (4)	0.34
Complications and outcomes			
Hospital length of stay (days)	20 [10.8-56]	14.5 [8.5-53.3]	0.5
ICU length of stay (days)	5 [2.3-14.5]	5 [3.3-9.3]	0.4
Acute kidney injury	37.5% (6)	35% (7)	0.9
Ischaemia	18.7% (3)	20% (4)	0.9
Sepsis	18.7% (3)	10% (2)	0.6
In-hospital mortality	12.5% (2)	10% (2)	0.93

-Values were reported as mean ±SD or %(n) of patients, or median [IQR]