

Supplementary Materials

Age-associated aortic arch morphological characteristics and acute type B aortic dissection: a retrospective case-control study

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Supplementary Table S1. Clinical indications for CTA examination in the control group

Indication	n (%)
Suspected aortic dissection (excluded by CTA)	36 (37.1)
Suspected aortic aneurysm (excluded by CTA)	22 (22.7)
Suspected pulmonary embolism	19 (19.6)
Preoperative evaluation for coronary artery disease	15 (15.5)
Trauma evaluation	5 (5.2)

Supplementary Table S2. Clinical features of patients with aTBAD

Clinical features	n (%)
Uncomplicated aTBAD	89 (84.0)
High risk	6 (5.7)
Refractory hypertension	5 (4.7)
Refractory pain	4 (3.8)
Complicated aTBAD	11 (10.4)
Malperfusion syndrome	11 (10.4)
-Renal malperfusion	6 (5.7)
-Visceral malperfusion	4 (3.8)
-Lower extremity malperfusion	3 (2.8)
Rupture	0 (0)

aTBAD, acute type B aortic dissection

A single patient may present with multiple simultaneous complications. Therefore, the sum of individual complications may exceed the total number of complicated aTBAD cases and the percentages may not add up to 100%. All percentages for complications are calculated based on the total aTBAD cohort (N=106).

Supplementary Table S3. Interobserver and intraobserver reproducibility of three-dimensional CTA measurements

Morphological parameter	Interobserver ICC (95%CI)	Intraobserver ICC (95%CI)
Ascending aorta diameter	0.94 (0.88–0.97)	0.96 (0.92–0.98)
Aortic arch diameter	0.96 (0.91–0.98)	0.97 (0.94–0.99)
Descending aorta TAL diameter	0.95 (0.91–0.97)	0.97 (0.94–0.98)
Descending aorta TL diameter	0.93 (0.89–0.96)	0.95 (0.92–0.97)
Ascending aorta length	0.91 (0.83–0.95)	0.94 (0.89–0.97)
Aortic arch length	0.93 (0.86–0.96)	0.95 (0.90–0.98)
Descending aorta TAL length	0.94 (0.90–0.96)	0.96 (0.93–0.98)
Descending aorta TL length	0.92 (0.87–0.95)	0.94 (0.90–0.97)
Ascending aorta volume	0.89 (0.79–0.94)	0.93 (0.87–0.96)
Aortic arch volume	0.92 (0.84–0.96)	0.94 (0.88–0.97)
Descending aorta TAL volume	0.88 (0.78–0.93)	0.92 (0.85–0.96)
Descending aorta TL volume	0.90 (0.85–0.94)	0.93 (0.88–0.96)
Ascending aorta angulation	0.91 (0.86–0.94)	0.94 (0.90–0.96)
Aortic arch angulation	0.90 (0.81–0.94)	0.93 (0.86–0.97)
Descending aorta TAL angulation	0.93 (0.86–0.96)	0.95 (0.90–0.98)
Descending aorta TL angulation	0.96 (0.91–0.99)	0.97 (0.94–0.99)
Ascending aorta tortuosity	0.93 (0.86–0.96)	0.96 (0.92–0.98)
Aortic arch tortuosity	0.91 (0.83–0.95)	0.95 (0.90–0.98)
Descending aorta TAL tortuosity	0.95 (0.90–0.98)	0.97 (0.93–0.99)
Descending aorta TL tortuosity	0.92 (0.85–0.96)	0.94 (0.88–0.97)

ICC, intraclass correlation coefficient; CTA, computed tomography angiography. ICC values were calculated using a two-way random-effects model with absolute agreement.