



STUDY OF ACUTE TYPE A AORTIC DISSECTION PATIENTS WITH UNDILATED AORTAS

Poster Contributions

Hall C

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Background: Large aortic diameter is accepted as a risk factor for type A aortic dissection (TAAAD). However, a significant percentage of TAAAD patients have aortas with no dilation. This paper seeks to study those patients with truly normal-sized ascending aortas.

Methods: The average diameter of the healthy ascending thoracic aorta is 34.1 mm and 31.9 mm for men and women, respectively. This study investigated TAAAD patients enrolled in the International Registry of Acute Aortic Dissection with undilated aortas (diameter <35 mm) compared to those with dilated aortas (35 mm or larger).

Results: Overall, 1796 TAAAD patients with dilated ascending aortas and 73 patients with undilated aortas were studied. Mean ages were 62 and 59, respectively. Patients with normal-size aortas were more likely to have Marfan syndrome (11.3% versus 4.3%, $P=.006$), more likely to have had a prior dissection (9.9% versus 4.0%, $P=.016$), and more likely to have an iatrogenic cause of TAAAD (5.7% versus 1.7%, $P=.038$). Normal-size patients were less likely to be hypertensive at presentation (16.2% versus 31.4%, $P=.008$), and less likely to present with abnormal ECG (51.5% versus 66.5%, $P=.010$). Intramural hematoma was seen in 5.9% of undilated patients, versus 5.8% in the larger group ($p=1.000$). Normal-size patients were less likely to suffer from acute renal failure in-hospital (14.3% versus 24.5%, $P=.050$). In-hospital mortality did not differ between groups. Finally, among patients who died, those with normal-size aortas were more likely to be female (66.7% versus 35.8%, $P=0.029$), to present with hypotension/shock (63.6% versus 30.5%, $P=.020$), or present with coma/altered consciousness (55.6% versus 21%, $P=.027$).

Conclusions: Ascending aortic size <35mm in patients with acute type A aortic dissection is more frequently associated Marfan syndrome, possibly due in part to a prior history aortic repair or the dangerous degenerative phenotype that predisposes these patients to earlier dissection. Mortality was similar between groups. Among patients who died, an undilated aorta is associated with a greater likelihood of hypotension/shock on presentation, coma/altered consciousness on presentation, and female gender.