RELATIONSHIP BETWEEN AORTIC DIAMETER AND MAJOR ADVERSE EVENTS IN TYPE B AORTIC DISSECTION - RESULTS FROM THE KAISER PERMANENTE REGISTRY OF AORTIC DISSECTIONS

ACC Moderated Poster Contributions
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Background: The relationship between maximal aortic diameter and major adverse aortic dissection events (MAAE), including mortality, in patients with type B aortic dissection remains poorly characterized.

Methods: Type B aortic dissection cases between 2005-2009 were identified from the Kaiser Permanente-Registry of Aortic Dissections (KP-RAD) where serial CT scans were available. The primary endpoint was major adverse aorta related events (MAAE) defined as aorta related mortality, dissection extension, or aortic rupture. KP-RAD is a population-based registry that captures consecutive cases of aortic dissections occurring among the greater than 3,000,000 health plan members in Southern California. A multivariable logistic regression model was used to generate predicted probabilities for mortality. Hazard ratios were calculated using Cox proportional hazards model adjusted for age and gender.

Results: There were 166 type B aortic dissection cases. The mean age ± SD was 66 ± 14 years and 35% were females. The mean maximal aortic diameter during follow-up was 42 ± 15 mm. Larger aortic diameters were associated with a higher predicted probability of MAAE (see figure). The hazard ratio (95% CI) for MAAE for diameters > 50 mm vs. ≤ 50 mm was 3.97 (1.70 - 9.29; P=0.001).

Conclusion: Maximal aortic diameter in type B aortic dissection is strongly associated with major adverse aorta related events. These observations may have important implications for the timing of aortic repair.