THE ASSOCIATION BETWEEN FALSE LUMEN THROMBOSIS AND AORTIC DIAMETER IN TYPE B AORTIC DISSECTIONS IN A LARGE COMMUNITY BASED COHORT

Poster Contributions
Hall C
Saturday, March 29, 2014, 10:00 a.m.-10:45 a.m.

Session Title: Assessment and Imaging of Vascular Disease
Abstract Category: 30. Vascular Medicine: Basic
Presentation Number: 1106-80

Authors: Keith Thompson, Armen Chalian, Ryan Clare, Yuh-Jer Shen, Michael Jorgensen, Colin Watanabe, Raymond Chen, William Gray, Ajay Kirtane, Somjot Brar, Kaiser Permanente, Los Angeles, CA, USA, Los Angeles, CA, USA

Background: False lumen thrombus (FLT) formation in type B aortic dissections is a poor prognostic sign associated with long term aorta related morbidity and mortality. The purpose of this study is to identify confounding clinical variables that that could help explain this.

Methods: We used a large community based cohort of >3 million persons to identify patients with type B aortic dissections and classified them based on the presence or absence of FLT on CT angiography during follow-up. Between-group differences for a variety of clinical variables including maximal descending aortic diameter at any time during follow-up were investigated.

Results: There were 198 patients included in the analysis; 107 patients had a patent false lumen and 91 had FLT. Patients who developed FLT were younger (mean age 64 vs 69 years; P=0.02) and more likely to present with chest pain (P=0.04), back pain (P<0.001), or hypertension (P<0.001). Patients with aortic atherosclerosis were less likely to develop thrombus (P=0.03). There were no other between group differences for gender, hemodynamic compromise or shock, cardiovascular complications, stroke, chronic kidney disease, concomitant valve disease, substance abuse (P>0.05 for all). The maximal aortic diameter was significantly higher in patients with FLT than in patients with a patent false lumen (mean 48 ±12 mm and 35±13 mm respectively; P<0.01).

Conclusion: The mechanism underlying the relationship between FLT and aorta related morbidity/mortality is poorly understood. These data suggest that poorer outcomes in patients with FLT may be explained, in part, by concomitant aortic dilatation.