

#8 MANAGEMENT TRENDS AND EARLY MORTALITY RATES FOR ACUTE TYPE B AORTIC DISSECTION: A 10-YEAR SINGLE INSTITUTION EXPERIENCE

Marie-Pierre Le Guillan, M.D., Bernard Montreuil, M.D.,
Oren K. Steinmetz, M.D., Kent S. MacKenzie, M.D.

McGill University, Montreal, Quebec, Canada

Purpose: To evaluate trends in management strategies and patient outcomes for acute type B aortic dissection.

Methods: A retrospective review of all patients with acute type B aortic dissection at the McGill University Health Center in the ten-year period from January 1993 to January 2003. Baseline demographic data was collected as well as initial diagnostic imaging findings, type of initial treatment (medical vs. surgical), surgical indications and type of surgical procedures. Early in-hospital mortality for medical and surgical management was evaluated. Outcomes for patients in the first half (Group 1) of this 10 year period were compared to patients in the second half (Group 2) and predictors of mortality were determined.

Results: Fifty-three patients (median age 70; 62% male) were treated for acute type B aortic dissection during the study period. Initial imaging included contrast enhanced CT scan (87%), transesophageal echocardiography (49%), angiography (38%) and MRI (4%) with initial radiological diagnosis of true dissection (n=40; 75.5%) and aortic intramural hematoma (IMH) (n=13; 24.5%). IMH was diagnosed in 7.7% (2/26 patients) in Group 1 and 40.7% (11/27 patients) in group 2. Treatment included initial medical management in 77.4% and urgent surgical management in 22.6%. Conversion from initial medical management to surgery during the acute phase (<14 days) was required in 8 (15.1%) patients. Surgical procedures included transthoracic aortic replacement in 15 patients (11 in Group 1; 4 in Group 2), femoral-femoral bypass in 1 patient (Group 1) and endovascular stent-graft placement in 10 patients (0 in Group 1; 10 in Group 2). The overall 30-day mortality rate was 14.8% for medical treatment and 30.1% for surgical treatment (p=0.3). Medical mortality was similar in Group 1 and Group 2 (21.4% vs 7.6%; p=0.3). An improvement in surgical mortality was observed from Group 1 to Group 2 (58.3% vs. 7.1%; p=0.019). Multivariate predictors of improved 30-day mortality by logistic regression included date of admission during study period, radiologic diagnosis of IMH and use of endovascular stent-graft repair (p<0.05).

Conclusion: The risk of early mortality with acute type B aortic dissection remains high with both aggressive medical and surgical management, however, an improvement in early mortality rates has been observed over time in our recent 10 year institutional experience. The increased radiologic recognition of IMH and the increasing utilization of endovascular thoracic stent-grafts appears to be associated with this improvement in early mortality.