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Treatment of patients with aortic dissection presenting with peripheral vascular complications.

Fann JI, Sarris GE, Mitchell RS, Shumway NE, Stinson EB, Oyer PE, Miller DC.

Department of Cardiovascular Surgery, Stanford University School of Medicine, California.

The incidence of peripheral vascular complications in 272 patients with aortic dissection during a 25-year span was determined, as was outcome after a uniform, aggressive surgical approach directed at repair of the thoracic aorta. One hundred twenty-eight patients (47%) presented with acute type A dissection, 70 (26%) with chronic type A, 40 (15%) with acute type B, and 34 (12%) with chronic type B dissections. Eighty-five patients (31%) sustained one or more peripheral vascular complications: Seven (3%) had a stroke, nine (3%) had paraplegia, 66 (24%) sustained loss of a peripheral pulse, 22 (8%) had impaired renal perfusion, and 14 patients (5%) had compromised visceral perfusion. Following repair of the thoracic aorta, local peripheral vascular procedures were unnecessary in 92% of patients who presented with absence of a peripheral pulse. The operative mortality rate for all patients was 25% +/- 3% (68 of 272 patients). For the subsets of individuals with paraplegia, loss of renal perfusion, and compromised visceral perfusion, the operative mortality rates (+/- 70% confidence limits) were high: 44% +/- 17% (4 of 9 patients), 50% +/- 11% (11 of 22 patients), and 43% +/- 14% (6 of 14 patients), respectively. The mortality rates were lower for patients presenting with stroke (14% +/- 14% [1 of 7 patients]) or loss of peripheral pulse (27% +/- 6% [18 of 66 patients]). Multivariate analysis revealed that impaired renal perfusion was the only peripheral vascular complication that was a significant independent predictor of increased operative mortality risk (p = 0.024); earlier surgical referral (replacement of the appropriate section of the thoracic aorta) or more expeditious diagnosis followed by surgical renal artery revascularization after a thoracic procedure may represent the only way to improve outcome in this high-risk patient subset. Early, aggressive thoracic aortic repair (followed by aortic fenestration and/or abdominal exploration with or without direct visceral or renal vascular reconstruction when necessary) can save some patients with compromised visceral perfusion; however, once visceral infarction develops the prognosis is also poor. Increased awareness of these devastating complications of aortic dissection and the availability of better diagnostic tools today may improve the survival rate for these patients in the future. The initial surgical procedure should include repair of the thoracic aorta in most patients.

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