

Surgical Fenestration as an Adjunct for Type B Aortic Dissection

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Objective(s):

The management of Type B aortic dissection usually is conservative, reserving surgery for complications. When complications occur, however, the patient is often very ill and unable to undergo definitive repair of the dissection. In these circumstances, more limited intervention is often undertaken in an effort to decrease the morbidity and mortality of these procedures. With this in mind, fenestration allows perfusion of both the true and false lumens and is an option that may decrease the risk of further complications.

Methods:

All patients subjected to arterial fenestration for aortic dissection between December 1999 and August 2004 were identified and reviewed retrospectively. Demographics, indications for intervention, complications, and outcomes were assessed.

Results:

In this interval, 14 patients were treated by arterial fenestration for complications resulting from Type B aortic dissection. No type A dissection required fenestration during this interval. Average age was 54.1 with a range of 30.9 to 79.2 years. Twelve patients were male (85.7%) and all were hypertensive at presentation. The indication for the procedure was branch vessel compromise in 11 patients (78.6%), progressive dilation of the aorta in chronic dissection in 2 (14.3%) and imminent rupture in an acute dissection in one patient (7.1%). The branch vessels affected were the renal arteries in 7

(50%), lower extremities in 7 (50%), celiac in 6 (43%) and superior mesenteric in 4 (29%). Multiple branches were affected in 8 patients (57%). Open surgical fenestration was performed at the level of the supraceliac aorta in 8 patients, infrarenal aorta in 2 patients and the common femoral artery in one patient. Three patients had combined supraceliac aortic fenestration and aortic replacement. Outcome was uncomplicated in 8 and there was no mortality with successful revascularization in all patients treated for vascular compromise.

Conclusions:

Arterial fenestration provides effective relief of branch compromise in patients with Type B aortic dissection. In this small series, reperfusion was accomplished with moderate morbidity and no mortality. Arterial fenestration should be considered as an important adjunct in the management of patients with complicated Type B dissection.