

ACCESS SITE MANAGEMENT IN THE CARDIAC TRANSPLANT PATIENT UNDERGOING CATHETERIZATION: SAFETY AND EFFICACY OF VASCULAR CLOSURE DEVICES

i2 Poster Contributions

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Background: Vascular closure devices (VCD) are frequently used in patients undergoing cardiac catheterization. Their safety and efficacy in patients following cardiac transplantation have not been studied.

Methods: Retrospective review of cardiac transplant recipients undergoing catheterization at our center, with a follow up of ≥ 4 months. Analysis is performed based on whether or not a VCD was used.

Results: Between January 2005 and June 2009, 233 cardiac transplant recipients underwent 413 cardiac catheterization procedures for their annual evaluation. A VCD was used in 206 of these procedures: angioseal in 143, starclose in 35, and perclose in 28. This was successful in 202 procedures (98.1%); device failure occurred in 2 perclose and 2 starclose patients. Hemostasis was achieved by primary manual compression following 207 procedures. The use of a VCD was associated with a higher prevalence of male sex, hypertension and dyslipidemia, and a lower prevalence of history of peripheral arterial disease (Table). One patient (0.5%) in the manual compression group developed a pseudoaneurysm while in-hospital, another patient (0.5%) had recurrent *Staphylococcus Aureus* abscess in the groin after 3 months that required drainage and antibiotic therapy. No complications were noted in the VCD group (P=NS); particularly, there were no infections at the access site.

Conclusions: The use of vascular closure devices in cardiac transplant recipients post cardiac catheterization appears to be safe and effective.

Baseline characteristics according to the use of a vascular closure device.

	Manual Compression (n = 207)	Closure Device (n = 206)	P-Value
Age (years)	57.6 \pm 14.7	58.5 \pm 12.9	0.83
Male sex	148 (71.5)	169 (82.0)	0.01
Race (Caucasian)	181 (87.4)	185 (89.8)	0.45
Body surface area (m ²)	1.94 \pm 0.22	1.97 \pm 0.22	0.34
Hypertension	136 (65.7)	164 (79.6)	0.002
Diabetes	42 (20.3)	51 (24.8)	0.28
Smoking history	91 (44.0)	107 (51.9)	0.09
Dyslipidemia	158 (76.3)	175 (85.0)	0.03
Renal insufficiency	31 (15.0)	38 (18.5)	0.34
Family history of CAD	30 (14.5)	44 (21.4)	0.07
Peripheral arterial disease	14 (6.8)	5 (2.4)	0.04
Blood Pressure (mmHg)			
Systolic	129 \pm 21	130 \pm 24	0.70
Diastolic	79 \pm 11	80 \pm 12	0.24
Mean	102 \pm 14	102 \pm 16	0.33
Serum creatinine (mg/dl)	1.55 \pm 0.91	1.60 \pm 0.75	0.11
Hematocrit (%)	39.5 \pm 4.6	39.2 \pm 4.4	0.45
Platelet count (x10 ³ /m ³)	240.5 \pm 92.1	240.0 \pm 67.6	0.30
Partial Thromboplastin Time (sec)	29.6 \pm 11.2	28.8 \pm 8.1	0.36
International Normalized Ratio	1.0 \pm 0.1	1.0 \pm 0.2	0.88
Use of antiplatelets and anticoagulants			
Clopidogrel	28 (15.5)	27 (14.2)	0.73
Heparin	13 (7.2)	17 (9.0)	0.53
Glycoprotein IIb/IIIa inhibitor	1 (0.6)	2 (1.1)	0.39
Coumadin	3 (1.7)	7 (3.7)	0.23

CAD, coronary artery disease; continuous variables are reported as mean \pm standard deviation; categorical variables are reported as number (%).