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Title: Pre-Implant Patient Triage Using Patient Status with INTERMACS Patient Profiles: Can We Refine Selection Strategy for MCS?

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Purpose: Implantable MCS is an established therapy for severe refractory heart failure. Seven patient profiles (PtP) reflecting acuity and severity of pre-implant illness status were created for the INTERMACS registry to refine pt selection to maximize MCS outcomes. We hypothesized that PtP would simplify and improve assessment of pt risk for MCS above the use of measured hemodynamic (hemo) and laboratory variables.

Methods and Materials: A total of 261 pts (74 sites) were entered from 6/23/2006 to 8/31/2007. Pre-implant PtP assignment was based upon the degree of inotropics and hemo stability. Ventricular arrhythmias were also assigned a modifier.

Results: Most pts were assigned to the inotrope-dependent profile levels 1(44%); 2(38%); 3(8%); with 10% assigned to levels 4-7. Age (table), inotropes, creatinine and bi-VAD implant differed among the PtP. Low LVEF did not differ, possibly due to high inotropes. Fewer pts were NYHA Class IV in levels 5-7. There were no significant differences in pre-implant ventricular arrhythmias between levels although a significantly greater proportion of pts had an ICD at MCS implantation in levels 2-7 (compared to level 1; p=0.001). Actuarial survival for levels 2-7 was improved compared to level 1, but these differences were not significant (p=0.11). However, transplant free survival did differ among the PtP.

Conclusions: Assignment of the PtP based upon the pre-implant status of the MCS pt significantly transcends traditional hemo descriptors. Early results identified a strong trend toward improved survival for elective implants in more stable pts (levels 2-7). Further development of PtP beyond measured hemo criteria may help refine selection and timing for new and future MCS devices.

Profile Level	No.	Age (yrs)*	% Inotrope *	% Bi-VAD*	LVEF < 20	Creat*	At 6 months	
							% Survival	% Free from death & transplant*
1. Critical cardiogenic shock	114	48	90	27%	80%	1.8	71%	39%
2. Progressive decline	99	51	94	17%	65%	1.6	74%	48%
3. Stable but inotrope dependent	20	52	95	5%	78%	1.1	88%	72%
4. Recurrent advanced heart failure	16	57	40	6%	82%	2.3	77%	37%
5. Exertion intolerant	2	41	50	50%	-	1.8	-	-
6. Exertion limited	4	60	0	0%	-	1.2	-	-
7. Advanced NYHA III	6	57	60	0%	-	1.9	-	-

* p < .05