

Longitudinal Health-Related Quality of Life in the 1st Year of Ventricular Assist Device Therapy: A Pilot Study of the QOLVAD Questionnaire

★ (Top 18 Nursing Abstract 2020) ★

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Disclosures

- Sandau: Co-author/
copyright for QOLVAD
- Other authors: Nothing to
Disclose



Objectives

- Health-Related Quality of Life (HRQOL) in the LVAD population
- QOLVAD questionnaire^{2,3}
- Purpose of this study
- Methods
- Demographics
- Results
- Conclusions/Future Research

Background of HRQOL in the LVAD population

- Subjective
- Dependent upon multiple factors
 - Patient perception
 - Caregiver perception
 - Society perception
- Can be VARIABLE based upon day to day life changes
- Instruments currently available are not adequate to reflect multi-dimensionality that LVAD patients face regarding HRQOL

Quality of Life Definition

- Multi-factorial
 - Depends on what you want to test?
 - Physical, Mental, Emotional, Cognitive, Overall Summary
- Conceptual Definition: “Being well enough in my life overall to the extent that I can do and enjoy day-to-day activities that are important to me” (Sandau et al., 2014, p. 39)
- Reflects overall how satisfied or content an individual is at any given moment¹
- Current metrics are not specific to LVAD patients

Current Instrumentation

- Kansas City Cardiomyopathy Questionnaire (KCCQ)
- Euro-QoL VAS (EQ-5D)
- Minnesota Living with Heart Failure Questionnaire (MLHFQ)
- Short Form-36
- 6-Minute Walk Test (objective functional status; not HRQOL)



QOLVAD Questionnaire



- Development based on qualitative study with resultant conceptual definition
- 5 domains were created based (HRQOL subscales)
 - Patients and researchers created items for each domain
 - Face validity obtained from both patients and clinicians
 - Preliminary validity and reliability reported at past ISHLT (final in process)

QOLVAD Questionnaire (cont'd)



- 43 Likert-type items for HRQOL presented as five subscales*
 - *The QOLVAD's six additional items not used in the present analysis because they were not part of the 5 domains or total score.
- Multi-center evaluation (7 sites) participated in testing psychometric properties

QOLVAD Domains

- Physical
- Emotional
- Social
- Cognitive
- Meaning/Spirituality



The Domains (43 items)

Physical Domain (15)

Activities of Daily Living
Sleep/Appetite/Energy
Strength
“Tricks” or Solutions
Adaptation to LVAD

Emotional Domain (10)

Hope, Sadness
Laughability
Coping
Confidence in LVAD function
Anxiety/Stress

Social Domain (10)

Burden
Travel
Contribution to Society
Work
Intimacy

Cognitive (Thinking) Domain (3)

Memory
Clarity of Mind
Concentration

Meaning and Spirituality Domain (5)

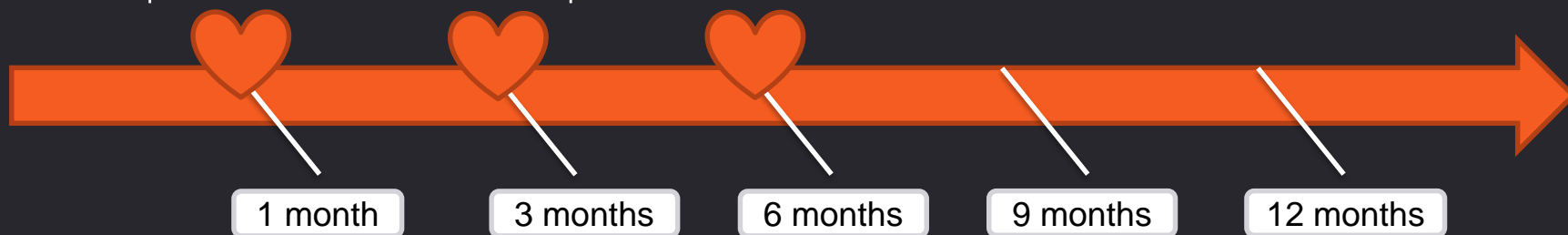
Value
Meaning and Purpose
Peace
Beliefs
Support

Purpose and Hypothesis

- Purpose:
 - To evaluate health-related quality of life changes in VAD patients over time using the QOLVAD questionnaire
- Hypothesis:
 - Health-related quality of life will improve over time following LVAD implantation

Methods

- Prospective, longitudinal study of patients implanted with destination therapy LVADs (n=37)
- Consecutive QOLVAD questionnaire completion
- September 2016-September 2019



- Data from 14 consecutive patients in the 1-3-6 month post-implant time frames were analyzed
- Statistical Analyses: Repeated Measures and Paired T-Tests
- Review trends in HRQOL following LVAD implantation



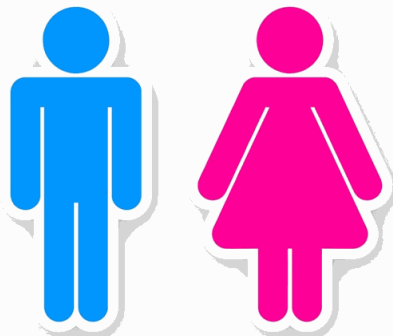
Sample Demographics

Destination Therapy

25 Males

15 Ischemic
Cardiomyopathy

10 Non-Ischemic
Cardiomyopathy



12 Females

2 Ischemic
Cardiomyopathy

10 Non-ischemic
Cardiomyopathy

	Overall (37)	Males (25)	Females (12)
Age (years)	65.8 ± 11.7	68.1 ± 11.5	61.2 ± 3.2
INTERMACS	3.2 ± 0.97		
Intermacs 1	5.4% (2)	0	16.7% (2)
Intermacs 2	21.6% (8)	16% (4)	33.3% (4)
Intermacs 3	21.6% (8)	20% (5)	25% (3)
Intermacs 4	51.4% (19)	64% (16)	25% (3)
Cardiomyopathy Type			
Non-Ischemic	54.1% (20)	40% (10)	83.3% (10)
Ischemic	45.9% (17)	60% (15)	16.7% (2)
Length of Stay (days)	18.7 ± 8.6	17.7 ± 7.9	20.8 ± 9.8
Readmissions	18.9% (7)	20% (5)	16.7% (2)

Results

	1 months (mean \pm SD)	3 months (mean \pm SD)	6 months (mean \pm SD)	Significance (F(df), P value)
Physical Domain	39.8 \pm 17.1	71.3 \pm 12.9	71 \pm 17.7	$F(2,26)=25.583$, $p=0.000^*$
Emotional Domain	77.2 \pm 15.9	78.8 \pm 4.3	77.3 \pm 16.7	$F(2,26)=0.098$, $p=0.907$
Social Domain	71.718 \pm 18.974	76.55 \pm 15.56	78.479 \pm 21.587	$F(2,26)=1.168$, $p=0.327$
Cognitive Domain	82.136 \pm 12.602	77.371 \pm 18.314	79.757 \pm 21.111	$F(2,26)=0.833$, $p=0.446$
Meaning/Spirituality Domain	79.914 \pm 16.350	86.071 \pm 18.416	86.429 \pm 18.02	$F(2,26)=1.144$, $p=0.334$
Total Score	63.257 \pm 12.78	76.371 \pm 11.867	76.607 \pm 15.903	$F(2,26)=13.462$, $p=0.000^*$

*=statistical significance

Conclusions

- QOLVAD questionnaire is LVAD specific for HRQOL assessment
- Involves multi-dimensional domains
- Physical domain demonstrated statistically significant change early on post LVAD implantation

Conclusions

- Cognitive domain has three items for measurement
 - May be higher at 1 month due to a variety of reasons
 - May drop at 3 months and struggle to get back to 1 month baseline scores due to patient independence and uncertainty in self-knowledge alone
- The QOLVAD needs larger sample to evaluate responsiveness to change & interventions following LVAD implantation

Future Research

- Larger sample sizes and multi-center research are needed to further evaluate:
 - individual responsiveness to change amongst each domain and overall HR-QOL using the QOLVAD questionnaire
 - appropriate interventions for HR-QOL improvement
- Need to consider options that measure multi-dimensional HRQOL approach PRE-LVAD implant

References

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