Patient-reported outcomes in lower extremity amputees with peripheral artery disease

Megan Alagna, Patrick Sweeney, Maggie Reilly, Karen J. Ho

Northwestern University Feinberg School of Medicine, St. Louis University School of Medicine

Introduction

- Peripheral artery disease (PAD) is a chronic, incurable disease that can lead to lower extremity major amputation
- The short- and mid-term experiences of patients who undergo major amputation for PAD are not well understood
- **Objective: investigate time-dependent changes in physical function and quality of life (QOL) after major amputation in people with PAD**

Methods

- Cohort: Patients who underwent lower extremity major amputation at NMH between 2022-2024
- Paper survey (56 items):
  - World Health Organization Quality of Life (WHO-QOL) assessments of physical, psychological, social, and environmental status
  - Patient-Reported Outcomes Measurement Information System (PROMIS) Short Form Physical Function and Depression tests
  - Demographic and clinical variables

Results

- 18 participants (**Table 1**)
- 37% survey response rate
- Time since amputation correlated significantly with lower scores on the depression test, suggesting improved mental health over time (**Table 2a**)
- Significant upward trend in social relationship, environmental health, and quality of life scores as time since amputation increases (**Table 2b**)

Table 1. Cohort characteristics. N (%)

Mean age (± SEM) (years)	62.1 ± 2.7
Female sex	6 (33.3)
Race	
Caucasian	8 (44.4)
Black or African American	7 (38.9)
Level of amputation	
Above the knee	5 (27.8)
Through the knee	2 (11.1)
Below the knee	11 (61.1)
Time since amputation	
0-6 months	4 (22.2)
7-12 months	6 (33.3)
13-39 months	8 (44.4)

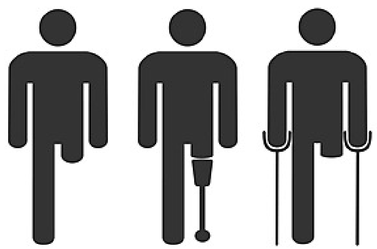
Table 2a. Differences in median QOL scores (Kruskall-Wallis)

Survey	**p value**
WHO-QOL overall	0.08
PROMIS SF	
Physical Function	0.48
Depression	**0.03**

Table 2b. Differences in median QOL trends over time across groups (Cuzick's trend test)

Survey	**p value**
WHO-QOL overall	**0.02**
Physical health	0.10
Psychological health	0.15
Social relationships	**0.03**
Environmental health	**0.03**
PROMIS SF	
Physical Function	0.20
Depression	**0.01**

Bold indicates $p < .05$



Conclusions

- As time since amputation increases, quality of life scores increase, and depression levels decrease
- **This work highlights the importance of providing sufficient resources for patients with PAD recovering in the first year after major amputation**

Future directions

- Future work should focus on establishing robust physical and mental health support services for patients throughout the post-operative period