

The Impact of Living with Severe Lower Extremity Lymphedema: A Utility Outcomes Score Assessment

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Abstract

Background: Debilitating lower extremity lymphedema can be either congenital or acquired. Utility scores are an objective measure used in medicine to quantify degrees of impact on an individual's life. Using standardized utility outcome measures, we aimed to quantify the health state of living with severe unilateral lower extremity lymphedema.

Methods: A utility outcomes assessment using visual analogue scale (VAS), time trade-off (TTO), and standard gamble (SG) was used for lower extremity lymphedema, monocular blindness, and binocular blindness from a sample of the general population and medical students. Average utility scores were compared using a paired t-test. Linear regression was performed using age, race, and education as independent predictors.

Results: A total of 144 prospective participants were included. All measures (VAS, TTO, and SG) for unilateral lower extremity lymphedema (0.50 ± 0.18 ; 0.76 ± 0.22 ; 0.76 ± 0.21 , respectively) were significantly different ($p < 0.001$) from the corresponding scores for monocular blindness (0.64 ± 0.18 ; 0.84 ± 0.16 ; 0.83 ± 0.17 , respectively) and binocular blindness (0.35 ± 0.17 ; 0.61 ± 0.28 ; 0.62 ± 0.26 , respectively).

Conclusion: We found that a sample of the general population and medical students, if faced with severe lymphedema, is willing to theoretically trade 8.64 life-years and undergo a procedure with a 24% risk of mortality in order to restore limb appearance and function to normal. These findings provide a frame of reference regarding the meaning of a diagnosis of severe lower extremity lymphedema to a patient and will allow objective comparison with other health states.