Living with a Unilateral Mastectomy Defect: A Utility Assessment and Outcomes Study

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J Reconstr Microsurg 2014;30:313–318.

Abstract

Background The gold standard for the treatment of breast cancer includes mastectomy surgery. Our goal was to quantify the health state utility assessment of living with unilateral mastectomy.

Methods The visual analogue scale (VAS), time trade-off (TTO), and standard gamble (SG) were used to obtain utilities for unilateral mastectomy, monocular blindness and binocular blindness from a prospective sample of the general population and medical students.

Results All measures (VAS, TTO, SG) for unilateral mastectomy (0.75 SD 0.17, 0.87 SD 0.14, and 0.86 SD 0.18, respectively) of the 140 volunteers were significantly different from the corresponding scores for monocular (0.61 SD 0.18, 0.84 SD 0.17, and 0.84 SD 0.18, respectively) and binocular blindness (0.38 SD 0.17, 0.67 SD 0.24, and 0.69 SD 0.23, respectively). Age, gender, race, education, and income were not statistically significant independent predictors of utility scores.

Conclusion In a sample of the general population and medical students, utility assessments for living with unilateral mastectomy were comparable with those of living with bilateral mastectomy and severe breast hypertrophy. Our sample population, if faced living with unilateral mastectomy was willing to gamble a theoretical 14% chance of death and willing to trade 4.2 years of existing life-years.

Keywords
- utility assessment
- quality-adjusted life years
- unilateral mastectomy
- breast reconstruction

One of the gold standards for treatment of breast cancer is mastectomy surgery.[1–4] The subsequent defect however, can be devastating for women. It can affect a patient's self-image and quality of life.[5,6] Plastic surgeons perform breast reconstruction with the goal to help restore women's physical appearance and sense of femininity.[7–9] Our group has previously described living with bilateral mastectomy defects using validated utility scores.[10] These utility scores are numeric values that range from 0 denoting "death" to 1 representing "perfect health" that can be determined using different validated tools[11–14]: including the visual analogue scale (VAS),[15] time trade-off (TTO),[16] and standard gamble (SG).[17] Utility assessment is a means of quantifying the impact of a disease or given health state on patients.[18] In clinical trials, it is becoming a more recognized tool in providing comprehensive data on the overall health of individuals.[19] Furthermore, in evaluating the cost-effectiveness of healthcare interventions in industrialized countries utility scores such as quality-adjusted life years (QALYs) are an outcome measurement that are being incorporated more frequently.[20] Preference elicitation methods and instruments enable the potential outcomes of an intervention to be

received
September 17, 2013
accepted after revision
September 17, 2013
published online
February 17, 2014

DOI http://dx.doi.org/10.1055/s-0033-1361842.
ISSN 0743-684X.