A FOCUS ON THE PATIENT EXPERIENCE: ADVANCED UPPER LIMB PROSTHETIC RESTORATION VS HAND TRANSPLANTATION AND TOE-TO-HAND TRANSFERS

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INTRODUCTION

Dramatic advances have been made in electric multi-articulating hands, hand transplantation and reconstructive hand surgery during the last several years. When debating the best solution, it is critically important to enable individuals with limb loss to be able to make an informed decision with respect to aspects of: time from procedure to "function", costs, amount of therapy required, medications, potential complications, sensation, pinch and grasp, functional outcomes, as well as the appearance of the hand. The purpose of this study is to present the experience of individuals with bilateral hand amputations, their perception of disability as well as their function following these interventions.

METHODS

The subject population included 3 study groups- 3 bilateral transradial users of electric multi-articulating hands, 4 bilateral hand transplant patients and 1 bilateral multiple toe-to-hand transfer patient. Each individual was evaluated with the Southampton Hand Assessment Procedure (SHAP) and the Disabilities of Arm, Shoulder and Hand (DASH).

RESULTS

The Index of Function, as defined by the Southampton Hand Assessment Procedure (SHAP), demonstrated surprisingly similar results among bilateral prosthetic users, bilateral recipients of hand transplantation, and the bilateral toe-to-hand transfer. When comparing the results of the Disabilities of Arm, Shoulder and Hand (DASH), bilateral transradial users of electric multi-articulating hands scored a lower perception of disability (mean=39.83) when compared to individuals who had undergone hand transplant surgery (mean=53.25). The DASH score of the individual who had undergone bilateral toe-to-hand transfers was the lowest at 27.

CONCLUSION

Although the subject sample is small, this study sets the stage for further investigation as advances and options become available for the individual who has lost both hands, so that a prospective patient can compare not only the objective functional outcomes, but also the subjective experience as well.