complications, irreversible failure, non-recovery and death. Transition probabilities between health states were obtained from results of published clinical trials. Costs included in the model comprised those associated with surgery, patients’ follow up and post-surgical complications. Specifically, costs related to visits to physician, medication cost, and hospitalization for complications. The model included the costs of Qualys was estimated pre and post-surgery using the EQ-SD questionnaire from patients undergoing PK and lamellar surgery at Maineone Rosemont Hospital (Montreal, QC). RESULTS: The lamellar keratoplasty techniques were proved to be more effective than Qualys (+300 patients), and were less costly (-5,043.7 (610 / 100 patients) compared to PK. The gain of Qualys associated with lamellar keratoplasty resulted from a reduction of the waiting time for transplantation and from lower postoperative complication rates, both related to poor utility values. Deterministic and probabilistic sensitivity analyses confirmed the robustness of the base-case results. CONCLUSIONS: From a clinical and an economic standpoint, lamellar keratoplasty represents a preferred strategy for the treatment of corneal endothelial diseases.

SENSORY SYSTEMS DISORDERS – Patient-Reported Outcomes Studies

Changes in Health Related Utility Among Adults with Atopic Dermatitis: Treatment with Tacrolimus Ointment Compared to a Standard Corticosteroid Regimen

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OBJECTIVES: Long-term treatment with 0.1% tacrolimus ointment (TO) has been demonstrated as well-tolerated and effective for the treatment of atopic dermatitis (AD) but its impact on utility has not been reported. The purpose of this study was to estimate utility changes associated with TO versus a standard corticosteroid regimen (CR) in the treatment of moderate-to-severe AD in adults. METHODOLOGY: Data were analysed from a double-blind RCT. Patients were treated with either TO applied twice-daily for six months to the head, neck, trunk and extremities, or alternatively 0.1% hydrocortisone butyrate ointment administered to the trunk and extremities and 1% hydrocortisone acetate ointment applied to the head and neck. Health-related utility (EQ5D Index) was estimated by Monte Carlo simulation from SF12 responses collected during the clinical trial by applying a published mapping algorithm. RESULTS: Data were available for 972 patients (intention-to-treat), 53% of whom were male with a mean age of 32 years (SD 12). At baseline the mean EQ5D index was similar between both arms (0.721 vs. 0.730; p = 0.461, for CR vs. TO, respectively). After 28 days the mean EQ5D index improved in both treatment arms (0.820 vs. 0.849; p = 0.004, respectively). The incremental EQ5D index between the treatment arms increased as the trial progressed. At 6 months subjects treated with TO had significantly higher utility than CR-treated subjects (0.787 vs. 0.831; p = 0.001, respectively). CONCLUSIONS: Patients with AD had considerable decrement in health-related utility at baseline. Treatment with 0.1% tacrolimus ointment was associated with a consistently improved, clinically-significant, incremental increase in health-related utility compared to the corticosteroid regimen, increasing over a six month period.

Characterizing Functional Limitations for Adults with Diabetic Retinopathy

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OBJECTIVES: Progression of visual loss caused by retinopathy is a common and debilitating consequence of diabetes. Standardized descriptions of the functional impairments associated with diabetic retinopathy are required to develop health state descriptions for eliciting utilities. The objective was to characterize the functional impacts of diabetic retinopathy according to levels of visual function, informing relevant health states in diabetic retinopathy. METHODS: A list of potentially important impacts was developed from the literature and the National Eye Institute Visual Function Questionnaire (VFQ). One-on-one qualitative interviews were then conducted with 30 subjects with diabetic retinopathy to solicit feedback on functional and activity limitations. All participants underwent Early Treatment of Diabetic Retinopathy Study visual acuity and contrast sensitivity testing. A thematic analysis characterized the nature and drivers of functional limitations in diabetic retinopathy. Health state descriptions using these parameters were developed and reviewed by three ophthalmologists and one endocrinologist. RESULTS: Qualitative interviewing identified that visual acuity and contrast sensitivity in the better and worse-seeing eyes, the difference in these measures between the eyes, and the ability to drive were important determinants of health status. These status indicators were highly associated with participation in leisure activities; reading fine print (important for maintaining glycemic control when reading nutritional labels or glucometers); seeing well at a distance; and mobility outside the home. Functional limitations less useful in distinguishing between individuals with different visual functioning levels included watching television and needing help from others. Eleven unique health states, defined by visual acuity, contrast sensitivity, and VFQ scores, were then develop- ed which can be used for estimating vision-related utilities in diabetic retinopathy. CONCLUSIONS: This is the first study to categorize the vision-specific functional impacts of diabetic retinopathy according to measures of vision function. Measuring health state utilities for diabetic retinopathy is now feasible using these health state descriptions.