Abstracts

OUTCOMES OF CATARACT PATIENTS WITH ASTIGMATISM: IMPLANTATION OF TORIC VERSUS CONVENTIONAL MONOFOCAL INTRAOCULAR LENS

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OBJECTIVES: Implantation of toric intraocular lens (IOL) corrects preexisting astigmatism in cataract patients, providing better clinical outcomes compared to conventional monofocal IOLs. We sought to assess the impact of these clinical outcomes on lifetime patient health-related quality of life (HRQoL) and economic outcomes.

METHODS: A clinically based economic model examined outcomes in cataract patients ≥65 years old with pre-existing astigmatism (1.5–3.0D). Subjects received either bilateral toric IOLs or conventional IOLs, with or without intraoperative refractive correction for astigmatism. Data obtained from a systematic literature review were supplemented with survey results from 60 United States cataract and refractive surgery practices. A prospective study provided data translating uncorrected visual acuity (UCVA) to patient utilities. Outcomes were projected over life time and discounted at 3%.

RESULTS: The proportion of patients achieving spectacle independence and UCVA ≥20/40 improved by 19–29% from baseline to 30–50% with toric IOLs compared with 63% and 48% without toric IOL or intraoperative correction, respectively. Due to better UCVA outcomes, Toric IOL resulted in better utility scores than conventional IOL with and without intraoperative correction. This utility gain, coupled with a reduced lifetime likelihood of wearing glasses and contact lenses resulted in toric IOL being the dominant strategy over conventional IOL without intraoperative refractive correction. The use of toric IOL resulted in the total lifetime cost saving of $334/eye. CONCLUSIONS: Toric IOLs improve patients’ HRQoL by providing better vision outcomes and reduction in the need for intra- and postoperative refractive correction in cataract patients with astigmatism thus reducing the risks associated with refractive surgery. Other than visual acuity, additional factors should be considered by physicians and patients for the initial choice of treatment: the inconvenience of travel with glasses, lens cleaning and intangible benefits associated with improved self-perception.

HEALTH RESOURCE USE DURING STAPLE REMOVAL FOLLOWING GRAFT FIXATION

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OBJECTIVES: Burn patients undergoing skin graft fixation utilize additional health care resources with removal of staples (RoS). The objective of this study was to report time and resources utilized during RoS. METHODS: Data were extracted from a phase three multi-center clinical trial assessing efficacy and safety of a fibrin sealant (FS) compared to staples. Subjects had burn wounds measuring <40% of total body surface area (TBSA) and study wound sites measured 1–4% of TBSA. Health resource assessment included number of staples, number of visits to remove staples, time to remove staples, number of health care personnel removing staples, and additional pain medication. RESULTS: A total of 127 patients were included in this analysis. Of those, 66% were male and 69% were white. The median age was 29 years (range 1-62 years). The median number of staples used for skin grafting was 30 (range 7–88). One visit was required (Range 1–2), utilizing 10 minutes (Range 1–365) to remove staples. A median of 2 health care professionals were involved (range 1–9). A total of 59% of patients received additional sedation/pain medication during staple removal. The mean number of medications administered was 1.4 (range 1–3), and the most common choices were midazolam + fentanyl, morphine or ketamine. CONCLUSIONS: Removal of staples requires additional medical resources that can be quantified in terms of costs. Comprehensive cost-benefit analyses are needed to compare total cost of care by method of graft fixation.

SENSORY SYSTEMS DISORDERS – Patient-Reported Outcomes Studies

CHANGES IN HEALTH RELATED UTILITY AMONG ADULTS WITH ATOPIC DERMATITIS TREATED 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 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 QALYs gained versus a standard corticosteroid regimen (CR) in the treatment of moderate-to-severe AD in adults. MEHTODS: 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 (EQ5Dindex) 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), of whom were male with a mean age of 32 years (SD 12). At baseline the mean EQ-5Dindex was similar between both arms (0.721 vs. 0.730; p = 0.461, for CR vs. TO, respectively). After 28 days the mean EQ-5Dindex improved in both treatment arms (0.820 vs. 0.849; p = 0.004, respectively). The incremental EQ-5Dindex between the treatment arms increased as the trial progressed. At 6-months subjects treated with TO had significantly higher utility than CR-treated subjects (0.789 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 vision loss caused by retinopathy is a common and debilitating effect of diabetes. Standardized descriptions of the functional impact of 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 were the differences in these measures, 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 developed and validated 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.