Economic Evaluation of 2-Hour Post-Dose Cyclosporine (C2) Levels (C2) for Monitoring Versus Trough (C0) Levels for Neoral: An Economic Evaluation

Hageneyer EG1, Haussler B1, Balshaw R1, Keown P1, Kilburg A1, Kaló Z2, Nashan B4
1IGES Institut für Gesundheits-u. Sozialforschung, Berlin, Germany; 2Simon Fraser University and Syreon Corp; 3Department of Medicine, University of British Columbia; 4Novartis Pharma AG; 5Novartis Hungary Ltd; 6Dalhousie University Halifax

OBJECTIVES: Monitoring of Neoral by 2-hour post-dose cyclosporine (CsA) levels (C2) is an accurate measure of CsA absorption efficiency and exposure. It is superior to trough (C0) monitoring for prediction of rejection risk and for targeting optimal CsA doses. Our goal was to assess potential economic benefits of C2 monitoring by the use of an economic model.

METHODS: Parameter estimates for key clinical events were derived from two cohorts containing 296 patients for C2 monitoring and 204 for C0 monitoring. An economic model was developed to calculate treatment costs according to different clinical outcomes. This multiple regression model is based on resource utilization records of kidney transplanted patients at Medizinische Hochschule Hannover.

RESULTS: The incidence of clinically confirmed acute rejection (CAR) at 3 months post-transplant was 28.2% for patients monitored by C0 and 15.3% for C2. Delayed graft function (DGF) and graft failure occurred in 32.4% and 4.4% of the C0 population and 36.5% and 4.9% of the C2 population, respectively. These events resulted in a highly significant increment on 3-months treatment costs, i.e. £5424 (DGF), £6362 (CAR) and £14,117 (graft failure) compared to problem-free patients. Average direct three-months treatment costs were £22,583 for C0 and £20,650 for C2 cohorts. CONCLUSION: Use of C2 monitoring produces not only clinically important benefits but also provides an estimated saving of £1933 during the first 3 months after transplantation. Therefore, C2 promises to be a superior patient management strategy over C0 monitoring. The model developed allows a preliminary assessment of the short-term economic impact of C2 monitoring.

Cost-Consequences of Treating Women with Stress Urinary Incontinence with Duloxetine from the Perspective of the Statutory Health Insurance in Germany

Papanicolaou S1, Andlin-Sobocki P1, Thurhoff J1, Graf v.d. Schulenburg J-M1, Blanke M1, Finnern H2, Sykes D1
1Eli Lilly and Company Ltd, Windlesham, Surrey, UK; 2Stockholm Health Economics AB, Stockholm, Sweden; 3Johannes Gutenberg University Mainz, Mainz, Germany; 4University of Hannover, Hannover, Germany; 5Lilly Deutschland GmbH, Bad Homburg, Germany

OBJECTIVES: An important complication of Benign Prostate Hyperplasia is Acute Urinary Retention (AUR). This condition needs acute catheterisation and is a predisposing factor for surgery. Subsequent removal of the catheter is only possible in a minority of patients. Moreover, after removing the catheter the long-term prostatectomy rate is considerable. Alfuzosin increases the success rate of catheter removal, and may decrease the need for surgery. This study assessed the cost-consequences of treating patients with AUR with alfuzosin, watchful waiting or immediate prostatectomy from the perspective of the National Health Service (NHS) in the UK. METHODS: Starting from the treatment path and the immediate and 6-month clinical outcome of the trial programme “ALFAUR”, a medical decision model to compare the cost-consequences of watchful waiting, immediate prostatectomy and alfuzosin treatment was built in Excel MS 2000. The time horizon of the model was 6 months. Cost data were obtained from the NHS and resource use data gathered alongside the clinical trial. A Monte Carlo analysis, allowing variability in all uncertain parameters of the model, was performed to calculate the uncertainty surrounding the results. The unit cost of alfuzosin was £0.79. Patients were continued on alfuzosin for 6 months if the catheter was removed successfully. RESULTS: Treating patients with alfuzosin during initial hospitalisation for AUR and during the 6 months of follow-up after successful catheter removal generates a cost-saving of £330 (CONF INT) relative to placebo and £892 (CONF INT) relative to immediate prostatectomy. Both savings are statistically significant. Alfuzosin treatment was associated with a lower rate of prostatectomy after discharge with a successful catheter removal. CONCLUSIONS: Treating all patients hospitalised with AUR with alfuzosin decreases the need for surgery and leads to important savings for the public health care payer. Future studies should explore the QoL outcomes of the different strategies.