INFECTIONS IN PATIENTS WITH VESICOURETERAL REFLUX: PROPHYLAXIS IN THE REDUCTION OF URINARY TRACT INFECTIONS

METHODS: We conducted a systematic literature review of original research articles comparing PD and HD (or their subtypes) in both PubMed and EMBASE for the years 1996 to 2006. Articles were included if they 1) came under the major subject headings of “renal replacement therapy/economics,” or “dialysis/economics,” or “renal dialysis/economics,” or “hemodialysis units, hospital/economics,” or “kidney failure, chronic/economics,” and 2) contained the term “peritoneal dialysis” and either the term “hemodialysis” or “haemodialysis.” Pre-defined exclusion criteria were also applied. RESULTS: Twenty-five articles were included in the formal literature review. The majority of articles were cost evaluations, rather than full economic evaluations of both costs and outcomes. The results show that, in developed nations, HD is generally more expensive than PD to the payer. Research is more limited in developing and emerging countries. Due to inexpensive labor and high imported equipment and solution costs, PD is perceived to be more expensive than HD; however, the costs of dialysis differ by region and additional research is needed in the developing world. CONCLUSION: HD is a more expensive dialysis modality in developed regions of the world. Research in the developing world is too limited to draw definitive conclusions.

ENDOSCOPIC INJECTION VERSUS ANTIBIOTIC PROPHYLAXIS IN THE REDUCTION OF URINARY TRACT INFECTIONS IN PATIENTS WITH VESICOURETERAL REFLUX

OBJECTIVES: Vesicoureteral reflux (VUR) occurs in approximately 1% of infants and children and is associated with recurrent urinary tract infections (UTIs). Guidelines in the treatment of VUR target reducing the number of UTIs in patients with VUR. Treatment strategies include antibiotic prophylaxis, which is the current first-line treatment, as well as endoscopic injection and surgery. The objective of this study is to examine the use of endoscopic injection with dextranomer/hyaluronic acid (Dx/HA) as a curative option and as an alternative to antibiotic prophylaxis as it is gaining in popularity in the treatment of VUR. METHODS: The nationally representative PharMetrics Integrated Medical and Pharmaceutical database was used to conduct this retrospective analysis. Patients <11 years of age who were continuously eligible with an International Classification of Diseases (ICD)-9-CM for VUR were identified. Resource utilization and outcome measures were evaluated over a 6-month pre- and 12-month post-index period. As randomization is not possible in a retrospective database analysis, patients were matched 3:1, antibiotic prophylaxis to Dx/HA, by age, gender, urinary tract infections (UTIs) prior to index date, and diagnosing physician specialty. The primary outcome assessed was UTIs. RESULTS: Of the patients, 114 received a prescription for antibiotic prophylaxis and 38 underwent endoscopic injection with Dx/HA between January 2000 and December 2004. The average number of UTIs per year was 0.28 in the antibiotics cohort and 0.08 in the Dx/HA cohort, respectively. The incidence rate ratio (IRR) of 4.826 (P = 0.029) revealed that the average number of UTIs was 3.83 times greater for patients receiving antibiotic prophylaxis compared with patients who underwent endoscopic injection. CONCLUSION: Treatment with endoscopic injection with Dx/HA resulted in significantly fewer UTIs compared with children receiving antibiotic prophylaxis, supporting a role for Dx/HA as a first-line treatment option for patients with VUR.

INCREASING MARKET SHARE OF PRIVATE DIALYSIS CENTRES FROM HEALTH INSURANCE EXPENDITURES IN HUNGARY

METHODS: Data were derived from the nationwide database of the Hungarian National Health Insurance Fund Administration, Pécs, Hungary. The only health care financing agency in Hungary. We analysed the period between 1995 and 2005. Dialysis centres were classified into 3 major groups according to their ownership: private, central government (mainly at universities) and local authorities (mainly at county level hospitals). All the Hungarian dialysis centres are included into the study regardless of their ownership. RESULTS: The market share of different type of providers in 1995 from health insurance expenditures was the following: private providers 46.3%, central government 20.6% and local authorities 33.1%, which means that public ownership (20.6 + 33.1 = 53.7) dominated the dialysis care. The market share of providers significantly changed for 2005: private providers 89.8%, central government 5.3% and local authorities 4.9%. Between 1995–2005 private providers doubled their market share, while dialysis centres owned by the central government or local authorities lost 15.3 and 28.2 percent point respectively. CONCLUSION: The ownership structure of dialysis centres dramatically changed in Hungary after the social and political changes in the early 1990s. The previous dominance of the state has disappeared, and most of the dialysis care is provided by private for-profit dialysis centres.

TREATMENT OUTCOMES AND MEDICAL CARE OF PATIENTS WITH NEUROGENIC DETRUSOR OVERACTIVITY (NDO) RECEIVING BOTULINUM TOXIN A (BOTOX®) THERAPY

OBJECTIVES: To evaluate treatment outcomes, medical care and resource consumption of patients with neurogenic detrusor overactivity (NDO) before and after botulinum toxin A (BTA) therapy in Germany. METHODS: In a multi-center, cross-sectional, retrospective cohort study, information such as demographic characteristics, number of BTA therapies, urodynamic
parameters, occurrence of urinary tract infection (UTI), number of incontinence episodes, use of incontinence aids (e.g. absorbent pads, urinary reservoirs) frequency and number of outpatient consultations were collected by chart abstraction covering 12 months before and after first BTA therapy. RESULTS: Seven specialized hospitals enrolled 214 patients who received in total 418 BTA therapies between 2000 and 2006. Mean age was 38 years (SD 15), 68% were male. Seventy-seven percent suffered from NDO due to spinal cord injury, 14% due to spina bifida and 5% due to multiple sclerosis. Within 12 months 51% of patients received one BTA therapy, 41% two and 8% three BTA therapies. On average, time interval between BTA therapies was 8.0 months (SD 4.2). Within 12 months before first BTA therapy 63% of patients had incontinence episodes and 68% of patients UTI, after BTA therapy 28% and 33%, respectively. Incontinence aids were used by 58% of patients within 12 months before first BTA therapy and in 28% of patients after BTA therapy. In patients, who had used incontinence aids, mean cost per day and patient decreased from €2 (SD 2) to €1 (SD 2). Mean drug cost per patient to treat UTI within 12 months decreased from €163 (SD 242) before treatment to €80 (SD 142) after the start of BTA therapy. CONCLUSION: Presented data are the first data showing the clinical usefulness of botulinum toxin A under naturalistic conditions in Germany. Moreover, occurrence of incontinence and UTI was reduced resulting in lower cost for incontinence aids and UTI medication.

URINARY/KIDNEY—Methods and Concepts

PUK20

A COST EFFECTIVENESS ANALYSIS OF SOLIFENACIN COMPARED WITH EXTENDED-RELEASE TOLTERODINE FOR THE TREATMENT OF OVERACTIVE BLADDER

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OBJECTIVES: Overactive Bladder (OAB) is defined as urgency, with or without urge incontinence, usually with frequency and nocturia. The prevalence of OAB in Korea is increasing more than ever before. It is estimated at about 12.2% in adults aged over 18 years (men 10%, women 14.3%), and 14.9% in adults aged over 40 years (men 11.2%, women 18.4%). The study objective is to evaluate the cost-effectiveness of Solifenacin compared with Tolterodine ER for patients with overactive bladder. METHODS: We developed a decision-analytic model to estimate treatment patterns, resource utilization, and costs for a six-month period with a societal perspective. The clinical outcome (percentage reduction in micturition frequency) and probabilities (Patient Perception of Bladder Conditions, PPBC) for the 1st cycle were collected from the literature, and the probabilities of each node for the 2nd cycle from ordinary least square (OLS) regression models. METHODS: Data were collected from a prospective, randomized, controlled, open-label clinical trial where patients were assigned to one of two arms. One arm (GLC) only received glucose-based solutions (GBS). The other arm (ICO) also received GBS but for the long-dwell they received icodextrin instead. QoL was measured using the Spanish version of the KDQOL-SF-1.3. To be included in the analysis, patients must have completed two QoL surveys at least 90 days apart. Twenty-three out of 29 GLC and 27 out of 30 ICO patients qualified for the study. Two OLS regression models were used to estimate the impact of certain variables on the change in physical component (PCS) and mental component (MCS) scores. The dependent variables were calculated as the difference between the baseline and most recent PCS and MCS from the QoL surveys. Independent variables included a dummy variable for the study arm (1 = ICO, 0 = GLC), age, gender, and clinical variables such as urine volume and blood pressure at baseline. RESULTS: The regression equation for PCS had an adjusted R² of 0.335. Patients whose PD therapy included icodextrin reported significantly (p < 0.01) greater improvement in their PCS than those who only received GBS (5.3 points higher). The MCS equation had an adjusted R² of 0.232. There was no significant difference in MCS between the ICO and GBS group. CONCLUSION: The use of icodextrin in patients with diabetes on PD had better physical QoL outcomes than those who did not use icodextrin.

PUK21

THE IMPACT OF ICODEXTRIN ON QUALITY OF LIFE IN DIABETIC PATIENTS ON PERITONEAL DIALYSIS OVER TIME: A REGRESSION ANALYSIS

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OBJECTIVES: Icodextrin is a glucose polymer that has been used to replace traditional glucose in peritoneal dialysis (PD) solutions due to advantages such as improved ultra-filtration rates. The objective of this study was to estimate the impact of icodextrin on quality of life (QoL) in patients with diabetes using ordinary least square (OLS) regression models. METHODS: Data were collected from a prospective, randomized, controlled, open-label clinical trial where patients were assigned to one of two arms. One arm (GLC) only received glucose-based solutions (GBS). The other arm (ICO) also received GBS but for the long-dwell they received icodextrin instead. QoL was measured using the Spanish version of the KDQOL-SF-1.3. To be included in the analysis, patients must have completed two QoL surveys at least 90 days apart. Twenty-three out of 29 GLC and 27 out of 30 ICO patients qualified for the study. Two OLS regression models were used to estimate the impact of certain variables on the change in physical component (PCS) and mental component (MCS) scores. The dependent variables were calculated as the difference between the baseline and most recent PCS and MCS from the QoL surveys. Independent variables included a dummy variable for the study arm (1 = ICO, 0 = GLC), age, gender, and clinical variables such as urine volume and blood pressure at baseline. RESULTS: The regression equation for PCS had an adjusted R² of 0.335. Patients whose PD therapy included icodextrin reported significantly (p < 0.01) greater improvement in their PCS than those who only received GBS (5.3 points higher). The MCS equation had an adjusted R² of 0.232. There was no significant difference in MCS between the ICO and GBS group. CONCLUSION: The use of icodextrin in patients with diabetes on PD had better physical QoL outcomes than those who did not use icodextrin.