THE IMPACT ON COSTS OF TREATING COMPLICATIONS DUE TO CRONIC KIDNEY DISEASE IN PATIENTS UNDERGOING HEMODIALYSIS IN THE PRIVATE HEALTH CARE SYSTEM IN BRAZIL

Sagitt H1, Viana FA1, Roche Brazil, Sao Paulo, SP, Brazil

OBJECTIVES: To evaluate the impact on costs of treating complications derived from chronic kidney disease (CKD) in patients undergoing hemodialysis in the private health care system in Brazil. METHODS: Owing to the lack of local databases, a survey with experts was conducted to collect data about the main causes of hospital admissions which resulted from complications during the dialysis period of CKD patients. A universe of 600 patients from reference centers in Brazil was studied. Later, the experts answered a questionnaire about the procedures needed to manage complications. Then, a micro-costing was performed, only direct costs were considered: length of staying, medical procedures, physician fees and drugs. Sources used for costing were: CHPMP 2009 v.5 (physicians fees list), Revista Karios (January 2009) (drugs price list) and Guia Farmaceutico Brasindice (January 2009) (materials price list). The time horizon of this analysis was 1 year, thus no discount rate was assumed. The perspective assumed was that of the private payer. RESULTS: The 3 most frequent causes of hospital admissions and their respective costs in the studied centers were: cardiac complications (33.27%; R$13979); infections (31.90%; R$13508); and venous access complications (9.26%; R$5268). For an average patient, the total costs in 1 year of treatment were estimated to be R$5539. CONCLUSIONS: This study suggests that for the 600 patients studied group the economic impact for the private payer with hospital admissions caused by CKD complications is significant being as high as R$1236,393 in one year.

ANALYSIS OF THE PHARMACOTHERAPY COST OF PATIENTS WITH KIDNEY TRANSPLANTATION IN BULGARIA

Georgyov SP1, Paskalev ED2, Petrova GI3
1University Hospital “Alexandrovska”, Sofia, Bulgaria, 2Medical University in Sofia, University Hospital “Alexandrovska”, Sofia, Bulgaria, 3Medical University, Faculty of Pharmacy, Sofia, Bulgaria

OBJECTIVES: The financial burden of kidney transplantation depends on many variables as the age of patients, available complications, success rate, introduction of new medicines etc. The objective is to analyze the pharmacotherapy cost of patients with kidney transplantation in Bulgaria during 2006–2009. METHODS: It was collected information for all patients with kidney transplantation during 2006–2009. Out of 523 transplanted patients (n = 520) were included in the observation. The patient sample was systematized according to patient age, gender, medicines used for treatment and supporting therapy, monthly and yearly cost of pharmacotherapy. RESULTS: Thirty-six percent (n = 189) are female and 64% (n = 331) are male. Prevaling part of patients are among 31 to 50 years old (n = 246; 51%). Below 20 years are 7 patients and up to 70 years are 6 ones. The standard therapy includes a combination of immunosuppressants. In the prevailing part of the patients were prescribed ciclosporin A or sirolimus in combination with azathioprine or mycophenolic acid. In case of allograft rejection the thymoglobulin is used and in case of HBV infection is used lamivudin. The CAM therapy is performed with ganciclovir. The monthly cost of therapy during the first year of observation is varying among 8.29–€1276 for 354 of the patients, while the monthly cost at the end of the period was 9.08-€931.81 for 1374 of the patients. The yearly cost of pharmacotherapy was found to vary on average from €973 to €4325 per treated patient but the drop out level was high. CONCLUSIONS: The cost of the modern medicines have been found prescriber in the collected sample with a tendency for new medicines inclusion early after their market launch. The main dominants of the pharmacotherapy cost changes are the availability of infections, followed by the kidney rejection risk, and new medicines appearance on the local market.

THE COST-EFFECTIVENESS OF PHOSPHATE BINDERS FOR THE TREATMENT OF HYPERPHOSPHATEMIA IN CHRONIC KIDNEY DISEASE (CKD)

Keith NG1, Carlson R2, Meissner BL3
1Shire Pharmaceuticals, Wayne, PA, USA, 2Woods, Palm Harbor, FL, USA

OBJECTIVES: No research has comprehensively examined the cost-effectiveness between the phosphate binders within the CKD marketplace. Therefore, a model was developed to evaluate the cost-effectiveness of Fosrenol® (lanthanum carbonate), relative to other second tier agents, Renagel®/Renvela® (sevelamer hydrochloride/ sevelamer carbonate), for the treatment of hyperphosphatemia in CKD. METHODS: A cost-effectiveness model was constructed from a managed care perspective. Two different time horizons including 1 day and 1 year were considered. Model inputs were AWP, DAyCON, phosphate binding capacity, and percent of patients with phosphorus control. Comparator agents included lanthanum carbonate (1,000 mg), sevelamer hydrochloride (800 mg), and sevelamer carbonate (800 mg). Model outcomes consisted of the cost per phosphate bound daily and the cost per successfully controlled patient. Two break-even analyses were examined adjusting for the daily cost and percent of successfully controlled patients based on the most cost-effective agent. RESULTS: Lanthanum carbonate has a lower DAyCON (3.3) compared with sevelamer hydrochloride (8.2) and sevelamer carbonate (8.2) yet results in a greater amount of phosphate bound daily ($14.8 mg versus $23.6 mg and $236.2 mg). This translates into $0.03 per 1 gm of phosphate bound daily as compared to $0.07 for sevelamer hydrochloride and $0.06 sevelamer carbonate. The daily cost of lanthanum carbonate would need to increase by 114–167% for the cost per phosphate bound to be equivalent to sevelamer carbonate or sevelamer hydrochloride. The yearly cost per successful treatment was $7,342 with lanthanum carbonate, $17,476 with sevelamer hydrochloride, and $13,981 with sevelamer carbonate. The percent of successfully controlled patients treated with sevelamer carbonate or sevelamer hydrochloride would need to increase 85%–131% for the cost per successfully controlled patient to be equivalent to lanthanum carbonate. CONCLUSIONS: These results suggest lanthanum carbonate is a cost-effective phosphate binder in the treatment of hyperphosphatemia among CKD patients relative to other second line agents.

OPEN COLPOSUSPENSION, TENSION-FREE VAGINAL TAPE AND TENSION-FREE OBTRURATOR TAPE IN THE MANAGEMENT OF STRESS URINARY INCONTINENCE IN WOMEN: A COLOMBIAN COST-EFFECTIVENESS MODEL

OA1, Chicaiza L, Castilla P, Garcia M, Sanchez J, Delgado ME, Rubio JA, Lombato A
1National University of Colombia, Bogota, Colombia

OBJECTIVES: This study aims to assess the cost-effectiveness of open colposuspension (OC) and two suburethral sling techniques: the tension free vaginal tape (tension-free vaginal tape (TVT)) and the transobturator tape (transobturator tape (TOT) in colombian women. METHODS: As part of a clinical practice guideline development we conducted a review of literature to identify effectiveness measures for the procedures and complications for each one. To represent recurrent states of SUI, we created a Markov model. Three interventions were evaluated in four stages (initial surgery, relapse-retreatment, incontinence and dead); Some assumptions were introduced (e.g. relapse for open colposuspension treated with vaginal tapes, TVT with TOT and TOT with TVT, two different scenarios with continent improvement). We programmed model to 85 years with a model entrance in 45 years. We used a discount rate of 3% for cost and effects (DALY: Disability-adjusted life year). All direct costs were extracted from SOAT price list. We calculated incremental cost-effectiveness ratio (ICER), generated efficiency and affordability curves. CE threshold was Gross domestic product (GDP) (1619USD). All Colombian pesos were converted to dollars applying the following rate (210 pesos/USD). Sensitivity analysis was done. All analyses were performed in Treeage Pro. RESULTS: In spite the most effective alternative is TVT, this is the most expensive. CE threshold for TOT was US$815 and TVT was US$948 per procedure and no more than US$2875 per each women treated. ICER for TVT and TOT comparing with OC was 9720 and 45140 USS/AVAD, without discount, exceeding GDP threshold. Discounted ICERs were higher. CONCLUSIONS: Open colposuspension remained more CE than other alternatives. Less than US$2875 per each women treated can improve CE for TOT and TVT and reduces their. Cost-effectiveness evaluation for introducing health technology and clinical practice guidelines must be developed in our country.