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Journal

Value in Health, 10(3)

ISSN

1098-3015

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Publication Date

2007-05-01

DOI

10.1016/s1098-3015(10)68856-0

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A RETROSPECTIVE MATCHED COHORT STUDY OF THE BURDEN OF SECONDARY HYPERPARATHYROIDISM (SHPT) IN PREDIALYSIS PATIENTS WITHOUT VITAMIN D RECEPTOR (VDR) ACTIVATOR THERAPY

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OBJECTIVES: Secondary hyperparathyroidism (SHPT) can lead to significant morbidity, mortality, & health care resource utilization in chronic kidney disease (CKD) Stage 5 patients receiving hemodialysis. The objective of this study was to determine if predialysis patients with SHPT experience similar clinical and economic consequences as hemodialysis patients. **METHODS:** A total of 3067 adult predialysis patients with and without SHPT were evaluated from January 1999 to December 2004 in a retrospective matched cohort study using a patient-centric claims database. Patients had a minimum 12-month pre-index and 6-month follow-up after initial diagnosis of CKD and were grouped into cohorts; cohort 1: without SHPT, cohort 2: with SHPT. Annualized estimates of mean direct medical costs and health care utilization, and time to dialysis or death following index CKD diagnosis were compared. Generalized linear models (GLM) with gamma distribution and a log link function were used to assess differences in costs and GLM models with a negative binomial distribution were used to evaluate differences in health care utilization. Kaplan-Meier survival analysis and Cox proportional hazard models were used for time to dialysis and death analysis. All multivariate models were adjusted for confounders: gender, age, plan type, payer type, geographic region, physician specialty, pre-index co-morbidities, and pre-index total health care costs. **RESULTS:** Generalized linear models revealed CKD with SHPT had 3.61 times higher total costs, and 2.68 times more hospitalizations ($p < 0.0001$). Kaplan-Meier analysis revealed that CKD with SHPT progresses more quickly to death or dialysis. Cox models demonstrated that CKD with SHPT had a significantly higher risk of dialysis or death (HR = 5.05; 95% CI = 4.08–6.24; $p < 0.0001$). **CONCLUSION:** SHPT in predialysis patients without VDR activator therapy is associated with significantly greater direct total costs, inpatient hospitalizations, and disease progression compared to patients without SHPT and VDR activator therapy.