

COMPARISON OF PARATHYROIDECTOMIES WITH PARICALCITOL OR CINACALCET FOR TREATMENT OF SECONDARY HYPERPARATHYROIDISM IN HEMODIALYSIS PATIENTS

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The objective of this study was to compare the difference in parathyroidectomy rate in patients treated with paricalcitol compared to cinacalcet for secondary hyperparathyroidism. We conducted a retrospective cohort study using data from health insurance claims from January 1, 2001 to June 30 2007. The cohort consisted of 2,711 adult hemodialysis patients that were new users of either paricalcitol or cinacalcet. To be included, patients had to have a minimum of 12 months enrollment prior to initiation of drug treatment and at least 30 days follow-up.

We identified 1,387 new users of paricalcitol (average age = 52.72, 42.47% Female) and 1,317 users of cinacalcet (average age = 52.2, 47.3% Female). During follow-up there were 11 paricalcitol and 34 cinacalcet patients that had parathyroidectomies. The unadjusted rates of parathyroidectomies was significantly less for paricalcitol 0.28 per 100 person years (SD=0.3368), compared to cinacalcet 2.19 per 100 person-years (SD=0.2411), ($p < 0.0035$), representing an 87% lower rate of parathyroidectomy in those treated with paricalcitol. A Cox proportional hazard model that adjusted for age, gender, obesity, significantly different comorbidities, duration of hemodialysis, and duration of follow-up resulted in an adjusted risk reduction of 83% (Hazard Ratio = 0.17, $p < 0.001$) for paricalcitol compared to cinacalcet.

These data suggest that long-term treatment with paricalcitol is associated with significantly fewer parathyroidectomies compared to cinacalcet. The morbidity and related cost of parathyroidectomies should be considered when comparing these agents for the treatment of secondary hyperparathyroidism in hemodialysis patients. Further comparative studies are necessary to validate these results.