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OR30-1 Safety and Efficacy of Recombinant Human Parathyroid Hormone 1-84 for the Treatment of Adults with Chronic Hypoparathyroidism: Six-Year Results of the RACE Study

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Abstract

RACE is an open-label study that assessed the long-term safety and efficacy of recombinant human parathyroid hormone 1-84 (rhPTH[1-84]) for the treatment of hypoparathyroidism in adults

(ClinicalTrials.gov identifier NCT01297309). Patients initially received 25 or 50 µg/day of rhPTH(1-84) subcutaneously, once daily, with stepwise dose adjustments of 25 µg (up or down) to a maximum of 100 µg/day. rhPTH(1-84) could be titrated and oral calcium (Ca) and calcitriol doses adjusted at any time during the study to maintain albumin-corrected serum Ca levels in the target range of 8.0-9.0 mg/dL. A composite efficacy endpoint was the proportion of patients who achieved at least a 50% reduction from baseline (BL) in oral Ca dose (or Ca ≤500 mg/day) and at least a 50% reduction from BL in calcitriol dose (or calcitriol ≤0.25 µg/day), while normalizing or maintaining albumin-corrected serum Ca compared with BL value and not exceeding the upper limit of normal for the central laboratory. Here, we present 6-year safety and efficacy data with descriptive summary statistics (mean ± SD). The study cohort consisted of 49 patients enrolled at 12 US centers (mean age, 48.1±9.78 years; 81.6% female); data from 34 patients (69.4%) who completed 72 months (M72) of treatment with rhPTH(1-84) as of July 17, 2018 are presented here. Oral Ca and calcitriol doses were reduced by 40.4% and 72.2% at M72, respectively, and albumin-corrected serum Ca levels were maintained within the target range (BL, 8.4±0.70 mg/dL; M72, 8.4±0.68 mg/dL). At M72, 22 of 34 patients (64.7%) achieved the composite efficacy endpoint. Urinary Ca excretion declined from above-normal at BL to within the normal range (BL, 356.7±200.37 mg/24 h; M72, 213.2±128.82 mg/24 h). Mean serum creatinine levels remained stable (BL, 1.0±0.21 mg/dL; M72, 0.9±0.21 mg/dL), as did estimated glomerular filtration rate (eGFR; BL, 77.7±17.67 mL/min/1.73 m^2; M72, 79.4±18.39 mL/min/1.73 m^2). Serum phosphorus levels declined from above-normal at BL to within normal range (BL, 4.8±0.58 mg/dL; M72, 4.0±0.62 mg/dL); calcium-phosphorus product levels also declined (BL, 42.1±6.35 mg^2/dL^2; M72, 33.7±5.01 mg^2/dL^2). Treatment-emergent adverse events and treatment-emergent serious adverse events were reported in 98.0% and 26.5% of patients, respectively; no new safety concerns were identified. Continuous use of rhPTH(1-84) over 6 years resulted in a favorable safety profile, was effective, and improved key measurements of mineral homeostasis, notably normalization of urinary calcium.
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