Osteoporos Int (2014) 25:1195
DOI 10.1007/s00198-013-2461-z

LETTER

Incidence of milk alkali syndrome in the Women's Health Initiative clinical trial and cohort study: response to Neupane

R. L. Prentice · R. D. Jackson · M. Pettinger · J. E. Rossouw

Received: 21 June 2013 / Accepted: 10 July 2013 / Published online: 3 August 2013

Dear Editor,

We thank Dr. Neupane for her letter [1] on our report on calcium and vitamin D supplementation in the Women's Health Initiative (WHI) [2]. Though we did not collect information on the incidence of the rather common milk alkali syndrome, women in the WHI calcium plus vitamin D (CaD) randomized trial were queried twice a year, during the average 7-year intervention period, concerning the occurrence of hypercalcemia and concerning the initiation of kidney dialysis. A total of 51 intervention group and 52 placebo group women reported initiating dialysis during trial follow-up. Our regression analyses that stratify on 5-year baseline age, on randomization assignment in the WHI Hormone Therapy (HT) and Dietary Modification (DM) trials, and on baseline history of kidney stones yield a kidney dialysis hazard ratio (95 % confidence interval) of 0.98 (0.66, 1.44), with no evidence (p=0.72) of interaction with personal supplement use. In comparison, incident hypercalcemia was reported by 422 intervention group women compared to 245 placebo group women. The hypercalcemia HR (95 % CI) was 1.73 (1.47, 2.02) from Cox regression analyses that stratified on baseline age, HT and DM randomization group, and baseline history of hypercalcemia. The HR (95 % CI) was 1.83 (1.39, 2.39) among women not taking personal calcium or vitamin D supplements and 1.69 (1.39, 2.06) among personal supplement users. Censoring the follow-up period when a woman first becomes nonadherent to her assigned study pills gives a hypercalcemia HR (95 % CI) of 1.79 (1.45, 2.21). In summary, the 1,000 mg calcium carbonate plus 400 international units of vitamin D_3 studied in the WHI clinical trial evidently increases the incidence of hypercalcemia and, as previously reported, kidney stone occurrence, but did not increase the risk of kidney dialysis during trial follow-up.

References

1. Neupane S (2013) Incidence of milk alkali syndrome in the Women's Health Initiative clinical trial and cohort study. Osteoporos Int. doi:10.1007/00198-013-2451-1
2. Prentice RL, Pettinger MB, Jackson RD, Wactawski-Wende J, LaCroix AZ, Anderson GA, Chlebowski RT, Manson JE, Van Horn L, Vitolins MZ, Datta M, LeBlanc ES, Cauley JA, Rossouw JE (2013) Health risks and benefits from calcium and vitamin D supplementation: Women's Health Initiative clinical trial and cohort study. Osteoporos Int 24(2):567–580

R. L. Prentice (✉) · R. D. Jackson · M. Pettinger · J. E. Rossouw
1100 Fairview Ave N, M3-A410, POB 19024, Seattle, WA, USA
e-mail: rprentic@whi.org