

# A role for thiazide diuretic therapy in preventing bone loss, fracture, and nephrolithiasis in individuals with thalassemia and hypercalciuria?

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Received: 20 December 2016 / Accepted: 10 January 2017 / Published online: 13 February 2017  
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Dear Editor,

I thank Dede et al. for their comprehensive review on the treatment of thalassemia-associated osteoporosis, noting the high prevalence of hypercalciuria and nephrolithiasis, and the association of the latter with lower femoral neck bone density and higher fracture rates in male patients [1]. A recent study demonstrated hypercalciuria was present in 92% of individuals with thalassemia treated with deferasirox in a positive dose-dependent relationship [2]. Thiazide diuretic use reduces urine calcium loss and is associated with improved bone density and reduced risk of hip fracture in observational studies [3]. In individuals with hypercalciuria and osteopenia/osteoporosis, administration of a thiazide or indapamide with bisphosphonate therapy was associated with greater reduction in calciuria and greater improvement in bone density than with bisphosphonate therapy alone [4, 5]. Studies examining the efficacy of thiazide or thiazide-like diuretics alone or in combination with bisphosphonates in improving bone density and reducing the risk of nephrolithiasis and fracture in individuals with thalassemia and hypercalciuria would be worthwhile.

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A response to these comments can be found at doi: [10.1007/s00198-17-3927-1](https://doi.org/10.1007/s00198-17-3927-1).

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**Compliance with ethical standards**

**Conflicts of interest** None.

## References

1. Dede AD, Trovas G, Chronopoulos E, Triantafyllopoulos IK, Dontas I, Papaioannou N, Tournis S (2016) Thalassemia-associated osteoporosis: a systematic review on treatment and brief overview of the disease. *Osteoporosis Int* 27: 3409–3425. doi:[10.1007/s00198-016-3719-z](https://doi.org/10.1007/s00198-016-3719-z)
2. Wong P, Polkinghorne K, Kerr PG, Doery JC, Gillespie MT, Larmour I, Fuller PJ, Bowden DK, Milat F (2016) Deferasirox at therapeutic doses is associated with dose-dependent hypercalciuria. *Bone* 85:55–58
3. Kruse C, Eiken P, Vestergaard P (2016) Continuous and long-term treatment is more important than dosage for the protective effect of thiazide use on bone metabolism and fracture risk. *J Intern Med* 279: 110–122
4. Giusti A, Barone A, Pioli G, Girasole G, Siccardi V, Palummeri E, Bianchi G (2009) Alendronate and indapamide alone or in combination in the management of hypercalciuria associated with osteoporosis: a randomized controlled trial of two drugs and three treatments. *Nephrology, dialysis, transplantation: official publication of the European Dialysis and Transplant Association - European Renal Association* 24: 1472–1477
5. Arrabal-Polo MA, Arias-Santiago S, de Haro-Munoz T, Lopez-Ruiz A, Orgaz-Molina J, Gonzalez-Torres S, Zuluaga-Gomez A, Arrabal-Martin M (2013) Effects of aminobisphosphonates and thiazides in patients with osteopenia/osteoporosis, hypercalciuria, and recurring renal calcium lithiasis. *Urology* 81: 731–737