BONE

Low-dose glucocorticoid replacement does not reduce BMD

Adult patients with primary adrenal insufficiency or congenital adrenal hyperplasia do not show reduced BMD in response to low-dose glucocorticoid replacement therapy, report German researchers.

Glucocorticoids are known to influence bone homeostasis; however, studies of their effect on BMD have been inconsistent. A previous study found increased cases of osteoporosis in patients receiving glucocorticoid replacement therapy. “However, the average glucocorticoid dose the patients received was quite high,” explains senior investigator Marcus Quinkler. “We were interested in investigating whether BMD is reduced in patients on lower daily glucocorticoid doses than previously reported.”

Koetz *et al.* conducted a prospective, cross-sectional study of 81 patients with primary adrenal insufficiency and 41 patients with congenital adrenal

hyperplasia. Patients received either prednisolone or hydrocortisone. The team found that both cohorts had BMD values within the normal reference range; however, patients with primary adrenal insufficiency treated with the long-acting prednisolone showed a significantly lower BMD than did those receiving hydrocortisone.

“Our results provide some reassurance that currently used replacement doses of hydrocortisone do not have a major impact on bone,” adds Quinkler and concludes that “optimizing the glucocorticoid dose to deliver as little as possible, but as much as necessary, should be a priority in all patients.”

James Glover

Original article Koetz, K. R. *et al.* Bone mineral density is not significantly reduced in adult patients on low-dose glucocorticoid replacement therapy. *J. Clin. Endocrinol. Metab.* doi:10.1210/jc.2011-2036