Published in final edited form as:

Arch Dermatol. 2012 March ; 148(3): 314–315. doi:10.1001/archdermatol.2011.2715.

Improving care of our patients on glucocorticoids

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The study by Tee et al in this issue convincingly shows that bisphosphonates used in patients on long-term steroids for bullous diseases reduce steroid-induced osteoporosis. This is equally true for non-bullous diseases, as has been demonstrated in many published placebo-controlled randomized trials in the medical literature. Numerous studies in many medical fields have also demonstrated poor implementation of bisphosphonate use in populations at risk for osteoporosis and subsequent bone fractures because of the use of long-term glucocorticoids.

Many dermatologists prescribe glucocorticoids, but not bisphosphonates, and additional familiarity is important to optimize patient care. Based on the available evidence and the detailed American College of Rheumatology guidelines, bisphosphonates should be part of the therapeutic regimen when initiating long-term treatment with prednisone above a dose of 7.5mg daily for longer periods.¹ The one exception is women of child-bearing potential, where the potential for transplacental effects of the drug are a concern, even months or years after the drug has been stopped. The treating dermatologist should either start preventive treatment for osteoporosis or assure that the treating primary care physician or endocrinologist will manage this aspect of care. Osteoporosis, like diabetes and hypertension, needs appropriate management. Since bone loss begins within a couple of days or weeks of starting glucocorticoids, bone protective therapy should be started immediately if long-term glucocorticoid therapy is anticipated.

Unless there is a history of calcium renal stones or renal failure, patients treated with systemic glucocorticoids should also receive supplemental calcium and Vitamin D.

Calcium citrate or carbonate and Vitamin D are helpful and a necessary adjunct to any bisphosphonate therapy, but alone do not seem to be enough to avoid bone loss. While calcium is generally well tolerated, it may impair absorption of mycophenolate mofetil² and oral bisphosphonates. The timing of calcium intake relative to mycophenolate mycophenolate and oral bisphosphonate doses should be discussed with the patient to increase the likelihood of beneficial steroid-sparing effects with mycophenolate and bone protection with bisphosphonates.

Bisphosphonates themselves are now cheap and cost about \$10 month for generic versions. They do not require lab monitoring. A baseline DEXA scan is desirable to assess where the

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The authors have no relevant financial disclosures or conflicts of interest. JA drafted the manuscript. VPW made substantial contributions to revisions.

bone density is initially. Further DEXA scans help to assess whether treatment is still necessary when the patient is off steroids or whether the bisphosphonate is having the desired effect on bone preservation.

Like any effective drug bisphosphonates are not without problems. The package insert cautions about patients in end stage renal failure, but moderate renal failure with CRF > 30mL/min is not a contraindication. The most common initial problem is that bisphosphonates may irritate the esophagus. Bisphosphonates need to be taken with a full glass of water and the patient should not lie down after the dose for at least 30 minutes. Even if they follow this advice some patients do not tolerate the drug and they have to receive intravenous bisphosphonate therapy.

Rarely bisphosphonates can cause osteonecrosis of the jaw, which is more frequent in patients who have significant oral pathology, multiple myeloma, or receive the more potent longer acting intravenous bisphosphonates. Patients starting bisphosphonates should have a thorough dental evaluation, perform oral hygiene and routine dental prophylaxis, and have invasive dental procedures completed before starting therapy 4-6 weeks later. While the FDA has issued a warning about rare subtrochanteric and diaphyseal femur fractures on bisphosphonates, the agency has not issued a guideline that would change therapy. The risk of osteoporosis and subsequent fractures is much higher than the rare atypical long-bone fractures.

In summary, based on current evidence, bisphosphonates and adequate calcium and Vitamin D supplementation therapy should be started in any male >50 years or postmenopausal patient who either is beginning or receiving doses over 7.5mg prednisone equivalent daily for an anticipated duration of 3 months. High-risk patients would have a lower steroid dose threshold for intervention. Men <50 and premenopausal women with prevalent fragility fracture also require intervention.²

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