

We frequently provide services for patients who present with medical histories that include multiple drug therapies. For example, patients with autoimmune diseases that include lupus erythematosus, psoriasis, progressive inflammatory neuropathy, Sjögren's syndrome, temporal arteritis, ulcerative colitis, and rheumatoid arthritis, which commonly involve long-term glucocorticosteroid (prednisone) therapy. A common side effect of steroid use is glucocorticoid-induced osteoporosis (GIOP) which leads to an increased risk of bone fractures, resorption, and subsequent reduced formation.¹⁻³

The American College of Rheumatology (ACR) recently updated guidelines regarding GIOP that include the addition of bisphosphonate drug therapies. Clinicians are aware of the controversy surrounding oral bisphosphonates. Mavrokokki et al found the incidence of bisphosphonate related osteonecrosis of the jaw (BRONJ) in osteoporotic Australian patients, primarily on weekly oral alendronate therapy, is 1 in 2260 to 8470 (0.01% to 0.04%).⁴ However, if extractions were performed, the incidence was 1 in 296 to 1130 cases (0.09% to 0.34%).

Chiu et al noted that when patients have parallel oral bisphosphonate and steroid therapies, osteonecrosis becomes more problematic.⁵ It was also concluded that: (1) the combination of steroid and bisphosphonate therapy may induce osteonecrosis earlier, (2) osteonecrosis may be more severe, (3) it may respond more slowly to the drug discontinuation, and (4) recovery is less predictable. Glucocorticosteroids promote bone-resorbing osteoclasts and inhibition of bone-modeling osteoblasts.⁶ Nitrogen containing bisphosphonates (alendronate, risedronate, zoledronate) inhibit osteoclast activity, rendering the osteoclasts unable to release cathepsin-K, which is responsible for bone breakdown and eventual remodeling.⁷



Clinicians must be mindful of the ACR updates. The incidence of BRONJ from oral bisphosphonate therapy appears to be low, but combined with a history of chronic steroid therapy the morbidity becomes BSRONJ, which presents with potentially greater consequences.

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