Management of Steroid-Induced Osteoporosis

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Abstract: Corticosteroid induced bone loss occurs as early as the first six months in patients with rheumatoid arthritis on prednisone at 10 mg daily. For this reason, vitamin D (400-800 IU/day) and calcium (1,000-1,500 mg/day) are recommended in patients on steroids for more than four weeks. In postmenopausal women and elderly men who are to remain on corticosteroid for greater than four to six weeks, bisphosphonates should be used in addition to calcium and vitamin D supplementation. In those with established osteoporosis, the same regimen should be followed. In pre-menopausal women, the decision is less clear because no fractures occurred in this group in four bisphosphonate trials. In addition, the long-term benefit on bone mineral density in pre-menopausal women is not proven. Gonadal hormones are adjunct therapy for patient on corticosteroid therapy. However, there is no evidence of fracture prevention. Similarly, calcitonin is a potentially useful agent in those with bone pain, but its efficacy for fracture prevention remains to be established. Currently, fluoride is not considered appropriate treatment because the effects on bone quality is uncertain. Other agents such as parathyroid hormone, ipriflavone, growth hormone are potential therapeutic options that need more testing. Other measures such as weight-bearing exercises should be encouraged to maintain muscle strength. A bone mineral density measurement of either the lumbar spine or the hip is useful to monitor the efficacy of treatment.

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