

THIS WEEK in the JOURNAL

ORIGINAL ARTICLE

Alendronate after Parathyroid Hormone (1–84)

Whether antiresorptive therapy is required to maintain gains in bone mineral density after treatment of osteoporosis with parathyroid hormone (1–84) is unknown. The investigators previously reported that concurrent treatment with parathyroid hormone and alendronate offered no advantage over monotherapy with respect to bone mineral density; they now report that the use of alendronate after treatment with parathyroid hormone maintains or increases densitometric gains.

SEE P. 555; EDITORIAL, P. 624

ORIGINAL ARTICLE

Alendronate Alone or with Parathyroid Hormone for Osteoporosis

Women with osteoporosis who had been taking alendronate for at least 1 year were randomly assigned to continued therapy with alendronate alone or with daily or cyclic parathyroid hormone (1–34) for 15 months. Indexes of bone formation rose quickly in both parathyroid hormone groups but declined during cycles without parathyroid hormone, increasing again with the resumption of treatment. Bone resorption rose in both parathyroid hormone groups, more with continuous than with cyclic therapy. Cyclic administration of parathyroid hormone causes the early bone-formation, stimulating phase of therapy to be dissociated from the later phase (remodeling) and may have therapeutic implications.

SEE P. 566; EDITORIAL, P. 624

ORIGINAL ARTICLE

Prompt versus Delayed Insertion of Tympanostomy Tubes

In children younger than three years of age with persistent middle-ear effusion, prompt insertion of tympanostomy tubes, as compared with delayed insertion up to nine months later if effusion persisted, did not improve developmental outcomes in the children when they were six years old. These data support current recommendations not to routinely insert tubes in otherwise healthy children solely on the basis of a persistent middle-ear effusion.

SEE P. 576; CME, P. 642

ORIGINAL ARTICLE

Rocky Mountain Spotted Fever and Brown Dog Ticks

An outbreak of Rocky Mountain spotted fever in rural eastern Arizona affected 16 patients, 2 of whom died. Dense populations of brown dog ticks were found at the patients' homes, and *Rickettsia rickettsii* was identified in those ticks. The investigation implicated the ticks as the vector of Rocky Mountain spotted fever, which raises concern about the potential of this common tick to transmit *R. rickettsii* in other settings.

SEE P. 587; PERSPECTIVE, P. 551

CLINICAL PRACTICE

Postmenopausal Osteoporosis

A 63-year-old woman presents with a history of acute low back pain. She had menopause at 44 years of age but never received postmenopausal hormone-replacement therapy. She reports a Colles' fracture at the age of 60. Her mother had a hip fracture at 70. Lumbar-spine films reveal a new vertebral fracture. Dual-energy x-ray absorptiometry of the hip shows a bone mineral density T score of –1.3. How should her case be managed?

SEE P. 595; CME, P. 641

MECHANISMS OF DISEASE

RXR Heterodimers in the Metabolic Syndrome

The principal abnormalities of the metabolic syndrome are abdominal obesity, atherogenic dyslipidemia, hypertension, insulin resistance, inflammation, and prothrombotic states. This review focuses on the retinoid X receptor (RXR) and its partners in the metabolic syndrome. RXR and its partners are nuclear receptors that function as ligand-dependent transcription factors. The ligands are lipids, and the system functions as a cellular lipid sensor. Agonists and inhibitors of these receptors are promising treatments for this widespread syndrome.

SEE P. 604; CME, P. 643

CASE RECORDS OF THE MASSACHUSETTS GENERAL HOSPITAL

A Woman with Early-Stage Estrogen-Receptor–Positive Breast Cancer

A 58-year-old woman with cancer detected on mammography chose to undergo breast-conserving therapy. The tumor expressed estrogen and progesterone receptors and lacked *HER2/neu* amplification. The authors discuss management options for early-stage breast cancer, and new techniques that may help clinicians select optimal therapy.

SEE P. 617