

This Week in the Journal

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ORIGINAL ARTICLES

Parathyroid Hormone, Alendronate, or Both for Postmenopausal Osteoporosis

Theoretically, concomitant therapy with parathyroid hormone and alendronate might be synergistic, increasing bone formation while simultaneously reducing resorption. In this study, 238 postmenopausal women with osteoporosis were randomly assigned to receive daily parathyroid hormone (1–84), alendronate, or both for 12 months. Bone mineral density increased in all groups, with no significant differences between those receiving parathyroid hormone and those receiving both drugs. Bone formation increased markedly with parathyroid hormone therapy but not with combined therapy.

This study shows no evidence of synergy with concurrent parathyroid hormone and alendronate therapy.

SEE PAGE 1207; EDITORIAL, PAGE 1277

Parathyroid Hormone, Alendronate, or Both in Men with Osteoporosis

Parathyroid hormone increases both bone formation and bone resorption, and combining it with an antiresorptive agent might enhance its effects on bone mineral density. Eighty-three men, 46 to 85 years of age, with low bone mineral density were randomly assigned to receive alendronate, parathyroid hormone, or both; alendronate therapy was given for 30 months, and parathyroid hormone therapy was begun at month 6. Bone mineral density at the lumbar spine and the femoral neck increased significantly more with parathyroid hormone alone than with alendronate alone or combination therapy.

Alendronate may attenuate parathyroid hormone–induced stimulation of bone formation.

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ORIGINAL ARTICLE

D-Dimer in the Diagnosis of Deep-Vein Thrombosis

The diagnosis of deep-vein thrombosis is based on clinical evaluation of the patient and ultrasound examination of the lower extremities. This study found that measurement of D-dimer reduced the need for ultrasound examination without compromising patient safety.

D-Dimer is a by-product of fibrinolysis. It is a sensitive, albeit nonspecific, marker of deep-vein thrombosis and, as shown in this study, useful as part of a multifaceted diagnostic strategy.

SEE PAGE 1227; PERSPECTIVE, PAGE 1203

ORIGINAL ARTICLE

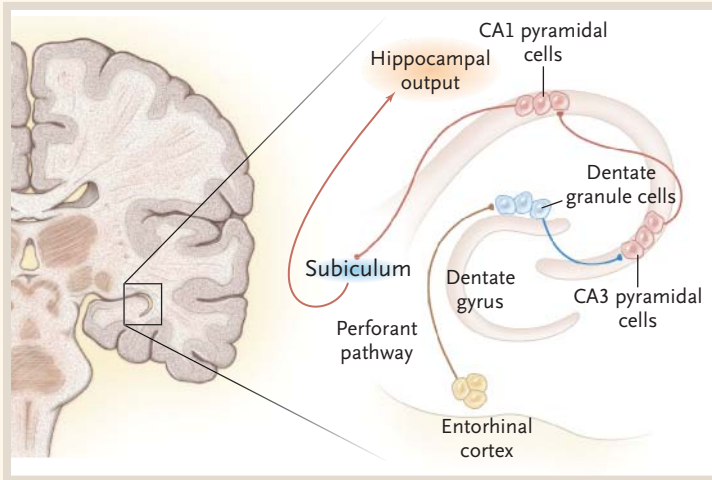
Transmission of West Nile Virus by Blood Transfusion

In 2002, 23 patients in the United States were confirmed to have acquired the West Nile virus through the transfusion of red cells, platelets, or plasma. Most of these patients were immunocompromised or at least 70 years of age, and meningoencephalitis developed in 13 patients about 10 days after the receipt of the implicated blood product.

Transfused blood, platelets, or fresh-frozen plasma can transmit West Nile virus. Nucleic acid–based screening of donors should reduce this risk.

SEE PAGE 1236; PERSPECTIVE, PAGE 1205

THIS WEEK IN THE JOURNAL



MECHANISMS OF DISEASE

Epilepsy

Recent research on epilepsy has uncovered important and clinically relevant mechanisms of generalized and localized seizures, among which are inherited abnormalities of ion channels, hippocampal sclerosis, cortical malformations, and dysfunction of glial cells. This review highlights research findings that suggest possibilities for the prevention and treatment of epilepsy.

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CLINICAL PRACTICE

The Evaluation of Suspected Pulmonary Embolism

An otherwise healthy 51-year-old woman presents to her physician with pleuritic right posterior chest pain, without dyspnea or hemoptysis. Her temperature is 38.2°C, and her pulse is 102 beats per minute. Physical examination discloses a pleural friction rub over the posterior right hemithorax but is otherwise unremarkable. A chest radiograph is normal. She is treated with an antiinflammatory agent for presumed viral pleurisy. Three days later, she returns, reporting dyspnea. How should she be evaluated?

SEE PAGE 1247

HEALTH POLICY REPORT

Due Process in Investigations of Research Misconduct

This report reviews federal regulations regarding research misconduct and argues that accused scientists should be guaranteed more procedural safeguards during investigations of alleged misconduct. Currently, the accused researcher's institution performs the investigation, and most institutional policies do not require the presumption of innocence and do not allow scientists to see the evidence against them. Investigations into research misconduct use a low standard of proof — preponderance of evidence — which requires that the evidence point to a finding that is more likely than not.

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