

THIS WEEK in the JOURNAL

ORIGINAL ARTICLE

Identification of Carriers of Mutations in DNA Mismatch-Repair Genes in Colon Cancer

A group of 870 consecutive patients with colorectal cancer were tested for germ-line mutations in DNA repair genes. A two-stage model was devised to predict the presence of mutations in DNA repair genes. A combination of clinical measures and immunohistochemical staining of the tumor for DNA repair proteins gave a positive predictive value of 80 percent and a sensitivity of 62 percent for mutation carriers.

SEE P. 2751; EDITORIAL, P. 2815

ORIGINAL ARTICLE

Homocysteine Lowering and Cognitive Performance

Prior observational studies have found elevated homocysteine levels among patients with Alzheimer's disease and inverse associations between homocysteine levels and performance on cognitive tests among community-dwelling older adults. In this two-year randomized trial involving healthy elderly persons with elevated homocysteine levels, treatment with folate and vitamins B₁₂ and B₆ lowered plasma homocysteine levels but did not improve cognitive performance.

SEE P. 2764; EDITORIAL, P. 2817; CME, P. 2847

ORIGINAL ARTICLE

N-Acetylcysteine and Contrast-Induced Nephropathy in Primary Angioplasty

In this study, consecutive patients with acute myocardial infarction who were undergoing primary angioplasty were randomly assigned to N-acetylcysteine at standard or double doses or to placebo. Creatinine concentrations increased after primary angioplasty in 33 percent of the patients in the control group, 15 percent of those in the standard-dose group, and 8 percent of those in the high-dose group (P<0.001). Intravenous N-acetylcysteine followed by oral N-acetylcysteine may prevent contrast-medium-induced nephropathy in patients undergoing angioplasty.

SEE P. 2773

ORIGINAL ARTICLE

Effect of Iodine Intake on Thyroid Diseases

Low or high iodine intake may lead to thyroid dysfunction. In this study, the prevalences of overt and subclinical hypothyroidism and autoimmune thyroiditis were increased with increasing iodine intake in regions of China with iodine intake that was mildly deficient (median urinary iodine excretion, 84 µg per liter), more than adequate (median, 243 µg per liter), and excessive (median, 651 µg per liter).

SEE P. 2783; EDITORIAL, P. 2819

CLINICAL PRACTICE

Early Lyme Disease

A 26-year-old woman with a summer home on Long Island, New York, had a low-grade fever, malaise, arthralgias, headache, and neck pain one week after removing a tick from her thigh. Examination reveals a nontender oval (8 by 12 cm), homogeneously erythematous lesion at the site of the tick bite, consistent with erythema migrans. How should this case be managed? What if she had presented earlier, just after removing the tick?

SEE P. 2794; CME, P. 2845

CASE RECORDS OF THE MASSACHUSETTS GENERAL HOSPITAL

A Man with Staphylococcal Bacteremia and Renal Failure

An 84-year-old man with a pacemaker was hospitalized for staphylococcal bacteremia and renal failure. Fever and respiratory symptoms had developed two weeks earlier; blood cultures were positive for methicillin-sensitive *Staphylococcus aureus*. Fever and bacteremia persisted despite antibiotic therapy, and slowly progressive renal failure developed. A diagnostic procedure was performed.

SEE P. 2803; CME, P. 2846

HEALTH POLICY REPORT

The New Era of Medical Imaging — Progress and Pitfalls

Spending on imaging services has grown rapidly in recent years, and annual costs are now estimated to be \$350 per person in the United States. Iglehart discusses the dramatic rise in physicians' use of imaging and the controversy surrounding recent changes in Medicare payment policies designed to curb the growth.

SEE P. 2822