

This Week in the Journal

JANUARY 30, 2003

VOL. 348 NO. 5

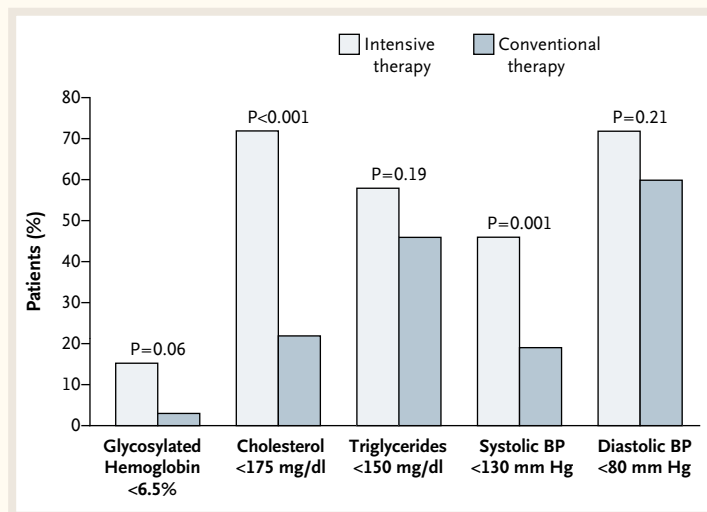
ORIGINAL ARTICLES

Multifactorial Intervention in Patients with Type 2 Diabetes and Microalbuminuria

Cardiovascular morbidity remains a major problem among patients with type 2 diabetes, especially those with microalbuminuria. These authors compared conventional therapy with intensive treatment involving a stepwise implementation of behavior modification and pharmacologic therapy to target hyperglycemia, hypertension, dyslipidemia, microalbuminuria, and secondary prevention of cardiovascular disease in an open, parallel trial.

Targeted, intensified, long-term intervention aimed at multiple risk factors in patients with type 2 diabetes reduced cardiovascular and microvascular events by half, indicating that this approach works well over time.

SEE PAGE 383; EDITORIAL, PAGE 457



On-Pump versus Off-Pump Coronary Bypass Surgery

To avoid the complications of cardiopulmonary bypass, techniques have been developed to stabilize the beating heart during “off-pump” coronary bypass surgery. In this randomized comparison of the two approaches, there were no significant differences in clinical outcomes or graft patency at one year, and the off-pump approach was more cost effective.

The patients in this study were generally at low risk, having predominantly one- or two-vessel disease. The results of off-pump surgery may not necessarily apply to patients with three-vessel disease, who make up a substantial fraction of patients undergoing coronary bypass surgery.

SEE PAGE 394; PERSPECTIVE, PAGE 379

Peritoneal Dialysis and Epithelial-to-Mesenchymal Transition of Mesothelial Cells

In continuous ambulatory peritoneal dialysis, bioincompatible fluids bathe the peritoneum, causing denudation of the mesothelial cells and, eventually, tissue fibrosis. This study characterized mesothelial cells from effluents in dialysis fluid. Soon after dialysis is initiated, peritoneal mesothelial cells undergo a transition from an epithelial phenotype to a mesenchymal phenotype, with progressive loss of epithelial morphology and changes in gene expression characteristic of a profibrotic state.

Mesothelial cells may play a part in the changes in the peritoneum that occur during dialysis. These findings suggest targets for the design of new dialysis solutions and markers for monitoring of patients.

SEE PAGE 403

THIS WEEK IN THE JOURNAL

SPECIAL ARTICLE

A Model for a Smallpox-Vaccination Policy

The authors estimated the effects of various vaccination policies in the event of hypothetical smallpox attacks. Vaccination of the public before such an attack occurred would cause about 500 deaths. A highly successful airport attack could result in about 50,000 deaths from smallpox, most of which could be averted by prior vaccination of the public. Smallpox vaccination would save lives only if the probability of an attack were substantial.

The certainty of vaccine-related deaths must be weighed against the chance of a large number of deaths from an attack. The appropriate national strategy depends on the probability of an attack. This model defines probability thresholds to guide policymaking.

SEE PAGE 416; PERSPECTIVE, PAGE 381

SPECIAL ARTICLE

The Public and the Smallpox Threat

This national survey revealed that the American public is not well informed about smallpox. The majority of the public mistakenly believes that a treatment is available for smallpox and that there have been cases of smallpox within the past five years. Most respondents stated that they would not agree to vaccination if physicians declined vaccination.

Education of the public about smallpox is needed. Physicians are likely to be very influential in shaping the public's views and decisions about smallpox vaccination.

SEE PAGE 426; PERSPECTIVE, PAGE 381

CLINICAL PRACTICE

Premenstrual Dysphoric Disorder

A 33-year-old woman reports irritability, periods of crying, mood swings, and severe fatigue beginning one week before the start of menses and ending within three days after its onset. The symptoms have begun to interfere with her usual social functioning. How should the physician treat this patient?

Premenstrual dysphoric disorder is a severe form of premenstrual syndrome that affects 3 to 8 percent of women of reproductive age.

SEE PAGE 433

CURRENT CONCEPTS

How Contagious Is Vaccinia?

Smallpox vaccination carries with it well-known risks of adverse events, but problems may also arise from the risk of secondary transmission of the live virus. This review article examines what is known about the potential for nosocomial infection and for spread within families. The author also assesses the implications for vaccination policy.

SEE PAGE 439; PERSPECTIVE, PAGE 381