

This Week in the Journal

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ORIGINAL ARTICLES

Effects of the Conjugate Vaccine on Invasive Pneumococcal Disease

In 2000, a protein-polysaccharide pneumococcal conjugate vaccine was recommended for use in infants and young children. Surveillance data show that from 1998 to 2001 the rate of invasive disease declined by 69 percent among children less than two years of age. There were also smaller but significant reductions in pneumococcal disease in adults.

The use of the conjugate vaccine is reducing the frequency of pneumococcal sepsis and meningitis in infants and young children, for whom it is recommended. A side benefit appears to be the prevention of disease in adults because of reduced transmission of pneumococci from young children.

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Effectiveness of Pneumococcal Vaccine in Older Adults

This population-based, retrospective study of more than 47,000 older persons assessed the effectiveness of pneumococcal vaccination. Vaccination was associated with a significant reduction in the risk of pneumococcal bacteremia, but over three years of follow-up there was no reduction in the risk of community-acquired pneumonia (hazard ratio, 1.07).

Although pneumococcal vaccination helps protect older persons against life-threatening bacteremia, it provides little if any protection against pneumonia. Other strategies are needed to prevent the nonbacteremic manifestations of pneumococcal infection.

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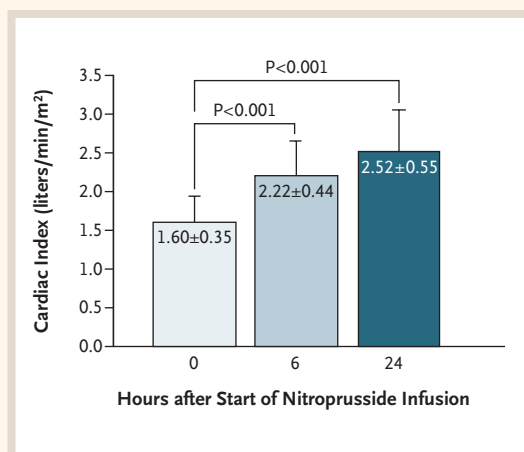
ORIGINAL ARTICLE

Nitroprusside in Severe Aortic Stenosis and Heart Failure

In critically ill patients with aortic stenosis and left ventricular dysfunction, vasodilator therapy has been considered to be contraindicated because of concern that it could cause hypotension. In this study, nitroprusside was administered to 25 such patients under carefully monitored conditions and, contrary to traditional teaching, was found to cause substantial improvement in the cardiac index and other hemodynamic variables.

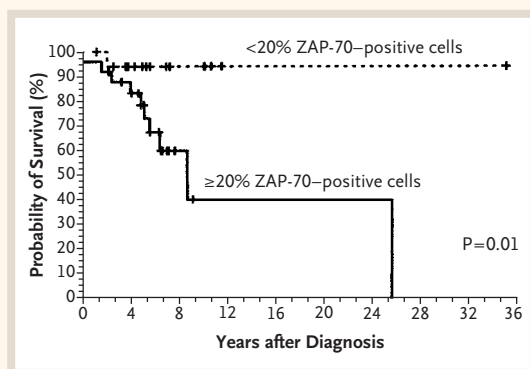
These findings will change the standard approach to the treatment of these severely ill patients. Nitroprusside therapy can be used as a bridge to aortic-valve replacement or to maintenance therapy with oral vasodilators.

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THIS WEEK IN THE JOURNAL

ORIGINAL ARTICLE

ZAP-70 Expression and Prognosis in Chronic Lymphocytic Leukemia

Mutations of immunoglobulin genes in chronic-lymphocytic-leukemia (CLL) cells augur a good outcome, whereas the absence of mutations indicates a poor prognosis. The presence of ZAP-70 on CLL cells correlated with unmutated immunoglobulin genes and a poor prognosis, whereas its absence indicated the presence of mutated genes and a good outcome.

Discovery of the prognostic importance of immunoglobulin-chain mutations, a major advance in CLL, has been slow to change clinical practice, because finding mutations is complex and expensive. However, any laboratory with a flow cytometer can measure ZAP-70.

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GENOMIC MEDICINE

Hematologic Cancers

Hematologic cancers — that is, leukemias and lymphomas — usually result from somatic mutations in hematopoietic cells rather than heritable mutations. Many of these cancers have been classified on the basis of their morphology and the presence of tumor marker antigens. This review explains complementary DNA expression profiling, a genomic approach to the diagnosis of such tumors, with certain leukemias and lymphomas used as examples.

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CURRENT CONCEPTS

Management of Drug Withdrawal

This review summarizes the current approaches to the management of withdrawal in patients addicted to sedatives such as alcohol or benzodiazepines, opioids, or stimulants such as amphetamines or cocaine. Included are details of detoxification regimens and guidelines for recognizing and managing the most common complications.

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