

This Week in the Journal

FEBRUARY 6, 2003

VOL. 348 NO. 6

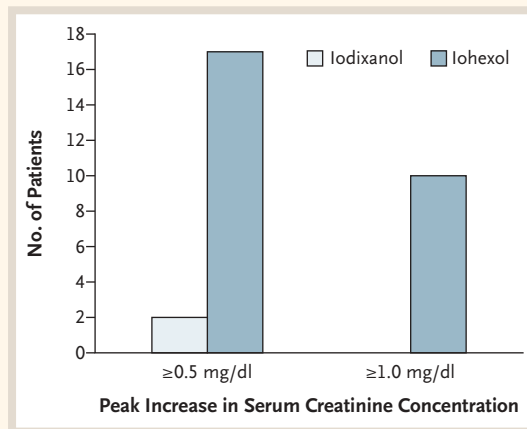
ORIGINAL ARTICLES

Nephrotoxic Effects in High-Risk Patients Undergoing Angiography

High-risk patients undergoing angiography are susceptible to nephrotoxic effects. This randomized, double-blind, prospective study evaluated the frequency of nephropathy in patients with diabetes and base-line serum creatinine concentrations of 1.5 to 3.5 mg per deciliter. They received either the iso-osmolar, dimeric, nonionic contrast medium iodixanol or the low-osmolar, nonionic, monomeric contrast medium iohexol. The increase in creatinine and the rate of frank nephropathy were significantly lower among those who received the iso-osmolar agent.

High-risk patients may be less likely to have contrast-medium-induced nephropathy when iso-osmolar contrast is used.

SEE PAGE 491; EDITORIAL, PAGE 551

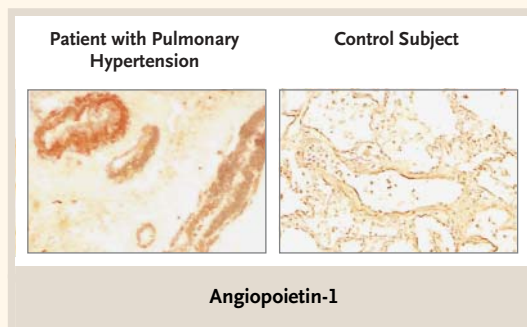


Signaling Molecules in Pulmonary Hypertension

Proliferation of smooth-muscle cells in pulmonary arterioles is central to the pathogenesis of pulmonary hypertension. In this study, a signaling pathway involved in smooth-muscle proliferation was found to be altered in patients with nonfamilial forms of pulmonary hypertension. The pathway includes angiotensin-1, a molecule that signals the recruitment of smooth-muscle cells, its receptor TIE2, and bone morphogenetic protein receptor type 2.

Previous studies have shown that mutations in bone morphogenetic protein receptor type 2 may cause familial forms of pulmonary hypertension. The current research links mechanisms involved in both familial and nonfamilial forms of pulmonary hypertension.

SEE PAGE 500



THIS WEEK IN THE JOURNAL

ORIGINAL ARTICLE

Cocaine-Associated Chest Pain

Three hundred two patients with cocaine-associated chest pain who were at low to intermediate risk were discharged from a chest-pain observation unit after 9 to 12 hours of observation and were followed for 30 days. There were no deaths from cardiovascular causes and only four nonfatal myocardial infarctions (all four in patients who continued to use cocaine). In contrast, an acute coronary syndrome was diagnosed in 20 of 42 high-risk patients who were directly admitted to the hospital (and thus not included in the study).

These findings support the safety of short-term, “rule-out” protocols for low-to-intermediate-risk patients who have chest pain associated with cocaine use. However, the high rate of cardiovascular events among cocaine-using patients who were admitted to the hospital underscores the need for careful evaluation of chest pain in this population.

SEE PAGE 510; PERSPECTIVE, PAGE 487

ORIGINAL ARTICLE

HPV Types Associated with Cervical Cancer

The type of human papillomavirus (HPV) in exfoliated cervical cells from almost 2000 women with cervical cancer and a similar number of control women from nine countries was determined by the polymerase chain reaction in 11 studies. Of the 33 types of HPV that were assayed, 18 were classified as high-risk or probable high-risk types and 12 as low-risk types. Odds ratios for cervical cancer that exceeded 200 were associated with HPV 16, 59, 33, and 18.

The results of this international study have important implications for the design of vaccines against HPV and the planning of efficient strategies to screen women for high-risk HPV types.

SEE PAGE 518; PERSPECTIVE, PAGE 489

REVIEW ARTICLES

Genetics and Response to Drugs

There is substantial variability among individual patients in the responses to pharmaceutical agents. Among the sources of variation in response are genetic differences in the enzymes responsible for drug metabolism, differences in the targets of the drug, and differences in genes that lead to side effects. Two articles in this issue — a Genomic Medicine article and a Drug Therapy review — discuss a number of clinically relevant inherited variants that affect drug action or side effects; the study of such variants forms the basis of the field of pharmacogenetics.

SEE PAGES 529 AND 538; EDITORIAL, PAGE 553

