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Next Week in the Journal

AUGUST 26, 2004

Athletes and Performance-Enhancing Drugs

Timothy Noakes



This Week in the Journal

AUGUST 19, 2004

ORIGINAL ARTICLE

Undetected Viremia among Tissue Donors

In this study, on the basis of data on 11,391 tissue donors, the probability of undetected viremia with the human immunodeficiency virus, hepatitis B virus, hepatitis C virus, and human T-lymphotropic virus was estimated to be 1 in 55,000 donors, 1 in 34,000, 1 in 42,000, and 1 in 128,000, respectively.

The prevalence of these four viral infections is higher among tissue donors than among first-time blood donors. The use of more sensitive screening methods can reduce the risks of infection among tissue recipients.

SEE P. 751; EDITORIAL, P. 819

ORIGINAL ARTICLE

Detection of HIV-1 and HCV RNA among Antibody-Negative Blood Donors

Since 1999, nucleic acid–amplification testing has been used in the United States to identify units of blood from donors with viremia in the window period before seroconversion. This approach identifies approximately 1 unit infected with human immunodeficiency virus type 1 (HIV-1) among 3.1 million units screened and 1 infected with hepatitis C virus (HCV) among 230,000 units screened.

The addition of nucleic acid–amplification testing to blood-donor screening prevents about 5 cases of transfusion-transmitted HIV-1 infection and 56 of HCV infection per year, resulting in a residual risk of these infections of approximately 1 per 2 million units of blood transfused.

SEE P. 760; EDITORIAL, P. 819;
CME, P. 842



ORIGINAL ARTICLE

Genetic Susceptibility to Cleft Lip or Palate

Cleft lip, cleft palate, or the combination of the two is a complex disorder caused by the interaction of several genes and possibly environmental factors. In this study, a variant of the gene encoding interferon regulatory factor 6 (*IRF6*) confers a substantial risk of cleft lip or palate.

This study represents a major step toward refining the estimation of risk in children born into families with a history of cleft lip or palate.

SEE P. 769; PERSPECTIVE, P. 745; EDITORIAL, P. 822

ORIGINAL ARTICLE

Circulating Tumor Cells and Prognosis in Metastatic Breast Cancer

An automated device that separates, identifies, and enumerates epithelial cells in whole blood was used to measure levels of circulating tumor cells in women with metastatic breast cancer who were embarking on a new course of treatment. High levels were correlated with short survival, whereas low levels predicted a favorable prognosis.

A determination of the level of circulating tumor cells may prove useful for stratifying patients enrolled in clinical trials.

SEE P. 781; EDITORIAL, P. 824

BRIEF REPORT

WNT4 Mutation Associated with Müllerian-Duct Regression and Virilization in a 46,XX Woman

WNT4, a secreted protein that suppresses male sexual differentiation, is thought to suppress the synthesis of gonadal androgen in females. These investigators describe a woman with no müllerian-derived structures, unilateral renal agenesis, and clinical signs of androgen excess who had a loss-of-function mutation in the *WNT4* gene.

By regulating the formation of müllerian ducts and controlling ovarian steroidogenesis, WNT4 appears to have an important role in the development and maintenance of the female phenotype in women.

SEE P. 792; PERSPECTIVE, P. 748

CURRENT CONCEPTS

Hookworm Infection

In areas of rural poverty in the tropics and subtropics, more than 700 million persons are infected with the parasites *Necator americanus* and *Ancylostoma duodenale*. The adult parasites cause intestinal blood loss, which leads to chronic iron-deficiency anemia. Hookworm infection is a major cause of disability in vulnerable populations. This review summarizes the current understanding of the life cycle of this parasite, the pathophysiology of the disease, and the options for simple and effective treatment that can have important benefits.

SEE P. 799; CME, P. 841



CASE RECORDS OF THE MASSACHUSETTS GENERAL HOSPITAL

A Woman with Cough and a Lung Nodule

A 56-year-old woman with a history of smoking began to have a cough that was productive of blood-tinged sputum. Radiography and computed tomographic scanning revealed a 2.5-cm nodule in the right upper lobe, with no mediastinal lymphadenopathy. Positron-emission tomographic scanning with fludeoxyglucose F 18 showed uptake in the nodule but not in the lymph nodes. A biopsy disclosed non-small-cell lung cancer. A multidisciplinary team discusses the approach to therapy.

SEE P. 809; CME, P. 843

CLINICAL IMPLICATIONS OF BASIC RESEARCH

A Candidate Vaccine for Severe Acute Respiratory Syndrome

A DNA vaccine expressing part of the outer-coat protein of the severe acute respiratory syndrome (SARS) coronavirus invokes humoral immunity in a mouse model of SARS.

SEE P. 827