

This Week in the Journal

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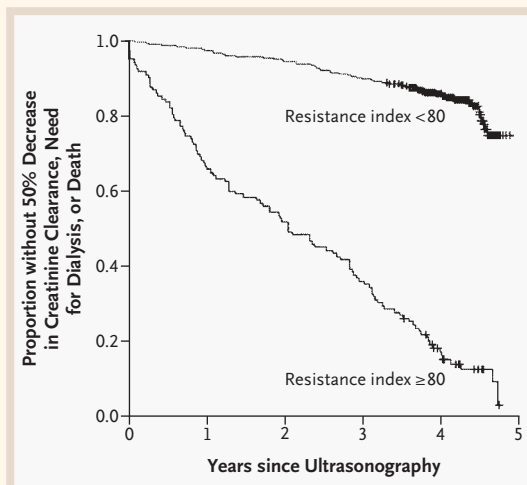
ORIGINAL ARTICLE

The Resistance Index as a Predictor of Long-Term Renal Allograft Survival

Most kidney transplants fail because of chronic allograft nephropathy or the death of the recipient, but methods for predicting such an outcome have been lacking. This study evaluated the predictive value of the renal segmental arterial resistance index (the percentage reduction of the end-diastolic flow as compared with the systolic flow). A high resistance index (80 or higher) was associated with an increased risk of a reduction in creatinine clearance, allograft failure, or death.

Doppler flow studies and calculation of the renal resistance index may help to predict future allograft function.

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ORIGINAL ARTICLE

Molecular Heterogeneity in Acute Renal Allograft Rejection

In this study, DNA microarrays were used to examine gene-expression patterns in biopsy samples from normal and dysfunctional renal allografts. Subtypes of acute rejection, indistinguishable by light microscopy, could be distinguished by differences in immune activation and cellular proliferation. Dense CD20+ B-cell infiltrates were significantly associated with clinical glucocorticoid resistance and graft loss.

Renal biopsies from patients with acute rejection may show extensive differences in gene expression, which are associated with differences in immunologic and cellular features and the clinical course of rejection.

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ORIGINAL ARTICLE

Antimyelin Antibodies as a Predictor of Clinically Definite Multiple Sclerosis

In this study of 103 patients with new neurologic symptoms, abnormalities on MRI, and cerebrospinal fluid findings that suggested multiple sclerosis, patients with antibodies to myelin oligodendrocyte glycoprotein (MOG) and myelin basic protein (MBP) were much more likely to have recurrent symptoms and progression to clinically definite multiple sclerosis than those without these antibodies.

The absence of anti-MOG and anti-MBP antibodies at the time of a first clinical manifestation of multiple sclerosis may identify patients who are likely to remain relapse-free for several years and who may not require early immunomodulatory therapy.

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THIS WEEK IN THE JOURNAL

ORIGINAL ARTICLE

Dalteparin Followed by a Coumarin versus Dalteparin Alone to Prevent Recurrent Venous Thromboembolism in Cancer

Secondary prophylaxis against recurrent deep-vein thrombosis is important in patients with cancer, since these patients have an increased risk of recurrence. The researchers compared dalteparin, a low-molecular-weight heparin, with an oral anticoagulant drug for six months after the initial event and found fewer recurrences with heparin.

Recurrent venous thromboses are burdensome to patients with cancer. The simplicity and efficacy of prophylaxis with low-dose heparin are likely to improve their quality of life.

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BRIEF REPORT

A Report of Dizygous Monochorionic Twins

It is generally accepted that monochorionic twins are exclusively monozygotic. The authors report a case of monochorionic twins of different sexes, conceived by in vitro fertilization, who proved to be dizygous.

This case contradicts the belief that monochorionic twins are necessarily monozygotic.

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MECHANISMS OF DISEASE

Medium- and Large-Vessel Vasculitis

Giant-cell arteritis typically involves extracranial branches of the aorta, such as the temporal and vertebral arteries. Temporal arteritis and polymyalgia rheumatica often coexist, and systemic manifestations of inflammation occur in virtually all forms of giant-cell arteritis. This article reviews the mechanisms that contribute to the causes of giant-cell arteritis, with an emphasis on immune-mediated injury to arteries.

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CLINICAL IMPLICATIONS OF BASIC RESEARCH

Molecular Mimicry in Multiple Sclerosis

Molecular mimicry is a model in which foreign antigens are sufficiently similar to native antigens to trigger an autoimmune response. A study involving the specificity of a T-cell receptor derived from a patient with multiple sclerosis indicates that molecular mimicry extends to complexes of proteins — a finding with implications for therapy.

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