

# THIS WEEK in the JOURNAL

## ORIGINAL ARTICLE

### Hydrocortisone for Septic Shock

The benefit of adjuvant use of corticosteroids in patients with septic shock remains controversial. In this international, multicenter, double-blind, placebo-controlled trial, adjunctive therapy with hydrocortisone in nearly 500 patients with septic shock was not found to be clinically helpful. This lack of benefit was also found in a subgroup of patients who did not have a response to a corticotropin test.

SEE P. 111; EDITORIAL, P. 188; CME, P. 211

## ORIGINAL ARTICLE

### Intensive Insulin Therapy and Pentastarch Resuscitation in Severe Sepsis

Optimal glucose control and fluid resuscitation in patients with septic shock remain a challenge. In this study involving more than 500 patients, the potential benefit of maintaining euglycemia through intensive insulin therapy and optimal fluid resuscitation with either pentastarch or Ringer's lactate was assessed. There was no benefit in the intensive-therapy group with respect to either 28-day survival or organ function; there was more severe hypoglycemia in the intensive-therapy group and more acute renal failure in the pentastarch group.

SEE P. 125; CME, P. 210

## ORIGINAL ARTICLE

### Sirolimus for Angiomyolipoma in Tuberous Sclerosis or Lymphangiomyomatosis

In this open-label trial, patients with tuberous sclerosis or lymphangiomyomatosis — conditions with constitutive activation of signaling by the mammalian target of rapamycin (mTOR) — received rapamycin (now called sirolimus) for 1 year and were observed for an additional year. Angiomyolipomas regressed with sirolimus therapy but generally increased after therapy was stopped. Pulmonary function improved after treatment in some patients. Suppression of mTOR signaling may hold therapeutic promise in these conditions.

SEE P. 140; EDITORIAL, P. 190

## ORIGINAL ARTICLE

### Outcomes in Athletes with Marked Repolarization Abnormalities

From a database of 12,550 trained athletes, 81 were identified who had markedly abnormal electrocardiograms (ECGs) in the absence of apparent structural heart disease. During 9 years of follow-up, cardiomyopathies developed in five of these athletes, including one who died suddenly and one who had cardiac arrest. No cardiomyopathies developed in 229 matched control subjects with normal ECGs.

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## BRIEF REPORT

### HIF2A Mutation in Familial Erythrocytosis

Hypoxia-inducible factor (HIF)  $\alpha$  is a transcription factor that modulates erythropoiesis, angiogenesis, and cellular metabolism. This study of a family with isolated erythrocytosis revealed a mutation in the gene for the HIF-2 $\alpha$  isoform, *HIF2A*, that prevents the hydroxylation of the protein by prolyl hydroxylase–domain protein 2 under normoxic conditions and hence blocks the normal step of degradation by the von Hippel–Lindau protein.

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## CLINICAL PRACTICE

### Long-QT Syndrome

After a 13-year-old girl dies suddenly while playing basketball, her family comes to the clinic for medical evaluation. Her parents' resting electrocardiograms (ECGs) are normal, but her 9-year-old sister's ECG has an abnormally long QT interval. The family history is notable for recurrent syncope in the maternal grandmother's female relatives. How should family members be evaluated and treated?

SEE P. 169; CME, P. 209

## CASE RECORDS OF THE MASSACHUSETTS GENERAL HOSPITAL

### A 45-Year-Old Man with Sudden Onset of Abdominal Pain and Hypotension

A 45-year-old man was transferred to the emergency department because of the sudden onset of abdominal pain, followed by hypotension. Except for a history of alcohol abuse and probable hepatic cirrhosis, he had been well until the morning of admission, when he experienced sharp abdominal pain while lifting a heavy object. He went to a local health center, where hypotension was noted, and was transferred to this hospital. Diagnostic and therapeutic procedures were performed.

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