The cardiovascular effects of metoclopramide in autonomic failure

Metoclopramide is frequently classified among those drugs that improve orthostatic tolerance in patients with autonomic failure, but its effects on blood pressure have not been systematically studied. Magnifico et al. (p. 163) report that metoclopramide infusion acutely lowered blood pressure and worsened orthostatic tolerance in patients with multiple system atrophy and pure autonomic failure. These findings should discourage the use of this drug in the treatment of orthostatic hypotension, and should be used carefully, if at all, for other indications in patients with autonomic failure.

Adenosine in vasovagal syncope

If endogenous adenosine contributes to neurogenic syncope, treatment with dipyridamole (which increases endogenous adenosine levels) would increase the incidence of syncope. Conversely, theophylline (which blocks adenosine receptors) would prevent tilt-induced syncope. Matjaž Šinkovec et al. (p. 155) reports that about half of their tilt-positive syncope patients had a subsequent negative tilt test while on placebo. Dipyridamole provoked neurogenic syncope during head-up tilt in 57% of patients with a history of syncope and a previously negative tilt test (what the authors called “moderately-sensitive subjects”), compared with 21% of patients with no history of syncope and a previously negative tilt test (“non-sensitive subjects”). This phenomenon could be prevented with theophylline in 75% of cases, strongly suggesting that dipyridamole-induced syncope was mediated by endogenous adenosine. Italo Biaggioni, in an accompanying editorial (p. 143), reviews the experimental evidence suggesting a role for adenosine in syncope and explains the significance and limitations of this study.

Autonomic dysfunction in Lambert-Eaton myasthenic syndrome

Sally Waterman (p. 145) reviews autonomic dysfunction in patients with Lambert-Eaton myasthenic syndrome (LEMS) (page XX). Almost all LEMS patients produce autoantibodies that downregulate the P/Q-type voltage-gated calcium channel. Electrophysiologic and pharmacologic studies have reproduced the functional effects of LEMS in passively immunized mice, and confirmed that anti-P/Q-type calcium channel antibodies inhibit transmitter release from autonomic neurons and are likely to be responsible for the autonomic dysfunction in this syndrome.

Abstracts of the AAS meeting