

studies have been performed.⁶ However, the safety of injecting air into the epidural space is well-established. Dr. Moore and others recommend the use of air as a test for entry of needles into the epidural space (as the air loss-of-resistance test).^{7,8} When this test is performed, air is necessarily injected into the epidural space. Does Dr. Moore believe that maternal precordial Doppler monitoring alters the safety of the epidural injection of air?

Air is safe when injected into the subarachnoid space during pneumoencephalography.⁹ Additionally, the use of the air loss-of-resistance technique may lead to the subarachnoid injection of large volumes of air in the event of a dural puncture. Is Dr. Moore aware of any significant complications resulting from such an occurrence?

With regard to the Doppler test,^{10,11} we believe that clinicians who try it will like it.

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Latent Myotonic Dystrophy: The Cause of Hydramnios and an Increase in Serum Creatine Kinase Concentration

To the Editor:—We recently reported on increased serum creatine kinase (CK) concentration related to the appearance of variant CK in a pregnant woman with hydramnios.¹ We have since found the cause to be latent myotonic dystrophy. Approximately 1 yr after her first pregnancy, hydramnios and an increase in serum CK level recurred. Also, her medical history revealed that her uncle had been suffering from myotonic dystrophy for 5 yr. We examined her again carefully, and found a slight cataract and an EMG characteristic of latent myotonic dystrophy.

Pregnancy unmasks latent myotonic dystrophy, but may not cause any apparent clinical symptoms.² In addition, increased serum CK is only moderate in myotonic dystrophy, and variant CK has no diagnostic value.³ Hydramnios, which is caused by impaired swallowing of amniotic fluid by the affected fetus, may be the first sign of the disease.⁴ Thus, diagnosis may be made only after occurrence of hydramnios and neonatal death.⁴

Even latent myotonic dystrophy can cause many complications and problems during anesthesia,⁵ and requires a precise family history and careful examination of the patient.⁶

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Preoperative Predictors of Perioperative Cardiac Morbidity

To the Editor:—Mangano¹ has provided an excellent review on the preoperative cardiac morbidity (PCM), but I believe his conclusions on preoperative predictors deserve some comment.

Mangano concluded that recent (<6 months) myocardial infarction (MI) and current congestive heart failure are the only two consistently proven preoperative predictors of PCM, and that the efficacy and cost effectiveness of specialized nonroutine tests remain controversial. These conclusions raise two questions. The first question is whether all patients with recent (<6 months) MI should have coronary angiography before major vascular surgery regardless of clinical condition. The second question is how the cardiac risk before noncardiac surgery should be evaluated for patients who have old (>6 months) MI or chronic stable angina.

Since it is too hazardous and expensive to perform coronary angiography on all preoperative patients with coronary disease, it would be most reasonable to use a noninvasive test that is sufficiently sensitive to identify the majority of patients likely to suffer PCM. Exercise stress testing is the standard method of revealing myocardial ischemia, but submaximal effort by patients secondary to their poor physical conditions may lead to false-negative results. Preoperative ambulatory Holter monitoring (AHM)² and dipyridamole-thallium imaging (DTI)³ have been proposed as alternatives. Preoperative DTI, when combined with clinical evaluation, seems most useful to stratify the cardiac risk in vascular patients.⁴ The efficacy of preoperative DTI in assessing the cardiac risk for noncardiac surgery has been proven.⁵

Preoperative ischemia detected by AHM has been reported to be the most significant correlate of PCM (the predictive value of negative result 99%).³ Among the several advantages of AHM over DTI are its lower cost and wider availability. Although further studies may be needed to confirm the preliminary findings of this study, ambulatory electrocardiographic monitoring has proven successful in detecting ST-segment changes indicative of myocardial ischemia in patients with coronary artery disease.^{6,7} Disadvantages of AHM include false-positive results in patients with cardiac hypertrophy and difficulty of interpretation in those with underlying electrocardiographic abnormalities.⁸ These disadvantages notwithstanding, the efficacy and cost effectiveness of AHM could be tremendous.

A decision to proceed with laboratory testing should be made only after the risk of the noncardiac surgery and the patient's clinical risk profile have been considered. With the use of noninvasive tests, one can stratify the cardiac risk. Patients with low risk need no further testing. In those with high risk, consideration of coronary angiography before noncardiac surgery is warranted.

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