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In Reply:—We appreciate the interest of Dr. Hermesh and associates in our article on the relationship between neuroleptic malignant syndrome (NMS) and malignant hyperthermia (MH).[1] In our study, we found *in vitro* contracture responses consistent with MH-susceptibility in five of seven NMS patients. These results resemble those of Araki *et al.*[2] who reported MH-like caffeine contractures in skeletal muscle from six of eight NMS patients. In contrast, Krivosic-Horber *et al.*[3] reported one MH-equivocal and five MH-negative contracture responses in muscle from six NMS patients. As discussed in our article, this disparity of findings may reflect the lack of standardization of methodology or a lack of specificity of *in vitro* contracture testing in muscle taken from patients with neuromuscular disorders. Other studies have shown similar abnormalities in the contracture response to halothane and caffeine among patients with myopathic or neurogenic disorders.[4] Further controlled investigations may clarify whether these responses imply clinical MH-susceptibility or represent non-specific effects of diseased muscle.

As reviewed in our article, several lines of evidence suggest that NMS and MH are triggered by different mechanisms that culminate in a similar dantrolene-responsive hypermetabolic state. This is supported by the attenuation of MH in swine by neuroleptics, the ameliorating effect of depolarizing muscle relaxants and centrally active dopamine agonists in NMS, the absence of familial susceptibility to MH in NMS patients, and reports of the safe use of triggering anesthetics in NMS patients.[1] Based on a retrospective review of the uneventful use of succinylcholine with and without halothane in 20 NMS patients, Hermesh *et al.* provide additional evidence against MH-susceptibility in NMS patients. However, it would be important to know more about these procedures, *e.g.*, the duration and dosages of all drugs administered, monitoring techniques, perioperative complications, etc. Furthermore, in retrospective studies, up to 70% of MH-susceptible patients did not develop hyperthermia during general anesthesia administered on previous occasions.[5]

In terms of anesthetic management, there is certainly no reason to withhold life-saving surgery from either NMS- or MH-susceptible patients. In addition, the risk of MH in a recovered NMS patient during ECT seems negligible, since MH has never been reported as a complication of this procedure in any patient. This may be due to the brief exposure to succinylcholine, the absence of inhalational agents, or the suppressive effect of barbiturates used for anesthesia during ECT.[6] Nevertheless, a careful approach to anesthesia may be warranted, especially for patients in the midst of NMS episodes, since these metabolically unstable patients may be at risk for anesthetic-related complications apart from MH.[7,8]

Additional studies that correlate *in vitro* testing and use of anesthesia in NMS patients may be worthwhile in determining anesthetic risk associated with NMS and the potential for cross-reactivity between MH and NMS.

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Appropriate Facilitation of Intravenous Regional Techniques in RSD

To the Editor:—Gargulio described the use of epidural sympathetic blockade to facilitate venous access in a patient with reflex sympathetic dystrophy.[1] We have used the local application of nitropaste ointment for the same purpose.[2]

A patient with lower extremity reflex sympathetic dystrophy diagnosed by prolonged pain relief from sympathetic blockade was scheduled for intravenous regional bretylium blockade. We used repeated epidural blocks, as described by Gargiulo,[1] to perform regional bretylium blocks on this patient. On one occasion, we could not achieve epidural blockade, and we applied nitroglycerin ointment directly to the skin over the vein to be cannulated, removing the excess paste after several seconds. The vessel promptly dilated, became visible, and was successfully cannulated with a 22-gauge catheter.

Hecker *et al.*[2] first described nitroglycerin ointment as an aid to venipuncture in adult patients. In that study, 50 patients were randomly allocated to two groups and observed for the difference in those patients with nitroglycerin ointment and those without. The degree of difficulty in cannulation on a scale of 1 (very easy) to 5 (failure) was scored and, in patients with nitroglycerin paste, venous cannulation was almost twice as easy compared with those without. Apart from tingling of the skin of the treated patients, no side effects were noted. Vaksmann[3] noted that nitroglycerin ointment was an aid to venous cannulation in children less than 1 yr of age, but not advantageous in children 1–10 yr of age. The age limitation was not explained.

In summary, topical nitroglycerin may be an effective, simple, low-risk method to produce dilatation of veins in patients with RSD.

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