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In Reply:—We agree with Ms. Stratton that the *t*-test was an inappropriate test to use in comparing the values in tables 2 and 5 of our recent article.[1] Indeed, we are not aware of any test that would be useful in comparing means derived in the fashion presented in tables 2 and 5. Nonetheless, these tables contain useful information for investigators in the field, with the caveat that the data are not derived from independent samples. However, the use of the *t*-test in no way affects our conclusions, especially with regard to diagnosis.

For example, comparison of the most positive response (table 3) for each animal with the use of only the first biopsy (the second biopsy for pig 10, since the first yielded nonviable specimens) results in the values given in table 1 here. These comparisons are reasonable and statistically valid and yield the same conclusions as contained in the original manuscript. The only other suitable comparison would be to compare the mean responses for one biopsy from each patient. This type of information is not useful in diagnostic testing and therefore was not presented.

TABLE 1.

Test	Control	MHS	*P*
3% halothane (g)	0.33 ± 0.10	1.66 ± 0.29	<0.001
2 mM caffeine (g)	0.03 ± 0.02	0.56 ± 0.22	<0.03
CSC (mM)	8.23 ± 0.53	4.82 ± 0.92	<0.01
Peak tension (%)	0.25 ± 0.25	7.94 ± 1.76	<0.001

Data are means ± SEM.

We appreciate the close attention that was given to our manuscript by Ms. Stratton and join her in cautioning other investigators that the point she makes is a crucial consideration for many studies, but one often is violated. That is, each subject should be represented only by a single value in comparisons of means of populations by a *t*-test.

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Effects of Epidural Saline and Epidural Fentanyl

To the Editor:—Recently Hore *et al.*[1] compared segmental sensory changes after epidural fentanyl *versus* epidural saline.

A fundamental deficit of the study is the use of "sensory change" as the end point of somatosensory testing. We object to this end point in that the term "sensory change" is vague and lacks a clear scientific definition.

In addition, epidural injection of isotonic saline causes the immersion of the nerve root or nerve trunk in the saline. The original interaxonal (extracellular) fluid slowly is replaced or displaced by this isoosmolar solution. Since the resting membrane potential (as well as action potential) across the cytoplasmic membrane is determined by both extracellular (interaxonal) and intracellular (intraxonal) monovalent ion concentrations and their transmembrane permeabilities (Goldman-Hodgkin-Katz equation), the resting membrane potential of such a nerve fiber is altered. The action potential of the nerve also is changed.[2] Consequently, patients receiving saline may experience a modified response to somatic stimulation and precipitate a perceived "sensory change." In addition, instillation of fluid into the epidural space causes an increased epidural space pressure. This mechanical pressure may cause dizziness, nausea, and frontal headache.[3] It also may affect the somatic nerve and result in a "sensory change." When fentanyl is incorporated into the epidural saline solution, after diffusing into the spinal cord, it can activate spinal opioid receptors and thereby produce analgesia in addition to the "sensory changes" produced by saline alone.[4] The "sensory change" caused by saline instillation may be of no practical value to anesthesia practice, but the spinal analgesia due to fentanyl has been widely used clinically to alleviate labor pain and chronic pain. We regret that this important point was overlooked in Hore and colleague's article.

We do not think that the word "block" in two of the figures (figs. 2 and 4) is justified. "Block" indicates an interruption of a specific signal transmission, and not a mere "change."

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