Neurologic Disease Requiring Long-term Ventilation

To the Editor:

I read with interest the recent article by Hammond and Potgieter concerning the use of selective decontamination of the digestive tract (SDD) in patients with neurologic disease requiring prolonged mechanical ventilation. Their conclusion that SDD was of no benefit in reducing secondary infections in these patients was interesting, but to some extent misleading. In an apparent effort to suggest that their group of patients may represent a unique subset who may not benefit from SDD, they compare their findings with four previous studies, all of which showed a significant reduction in the incidence of secondary infection in a larger group of patients with various disease states. While this comparison may have some merit, the authors fail to mention that an earlier study that they coauthored (in which the present group of patients with neurologic disease was included) failed to show any benefit of SDD in reducing the incidence of secondary infections.

While patients with neurologic disease may not benefit from SDD, the comparison of the present study with other studies that involved different patient populations, SDD regimens, infection control policies, and inclusion criteria should be scrutinized carefully. Would it not have been better for the authors to compare the subset of patients with neurologic disease with the remainder of their larger population, rather than retrospectively with other studies over which they had no control?

The issues addressed by Drs. Hammond and Potgieter are indeed important, as the proper role of SDD remains controversial. The usefulness of SDD, however, in patients with neurologic disease probably remains unanswered. A larger, more indepth study is probably required to determine the true effectiveness of SDD in patients with neurologic disease and to determine if these patients do indeed represent a population that is refractory to the benefits of SDD.

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The role of selective decontamination remains controversial in spite of the numerous studies evaluating this technique, largely because of flaws in study design. This technique may be useful under certain circumstances and in certain categories of patients at high risk for nosocomial infection. To confirm the value of SDD, we preselected a number of subgroups who formed part of a large double-blind study for further analysis, including groups of patients who had either previously been shown to benefit from SDD, eg, trauma and mid-range APACHE, or whom we thought were at particular risk and thus especially likely to derive benefit from this technique, such as this group of patients with neurologic disease.

In this controlled double-blind study of patients with neurologic disease, comparison between the active and placebo groups showed no benefit from the administration of SDD, and, as we indicated in the paper, the incidence of infections was considerably higher in the patients with neurologic disease when compared with the remainder of the population, thus supporting our postulate that this was a high risk group. Subanalyses of other high risk groups in our study failed to confirm the benefit to trauma patients shown previously in nonblinded studies. We believe our conclusion "that SDD is not useful in patients with neurologic disease" is correct in an ICU where the overall incidence of secondary infection is low. The numbers of patients in this study are small; however, these patients remained in the ICU for prolonged periods, and whilst there may have been a type 2 error, larger studies are unlikely to show major benefit from SDD.

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