time taken to zero the transducers, measure intracranial
elastance, possibly insert head pins, etc. Because MAC for
nitrous oxide is greater than 1 atmosphere, the authors
seem to be relying rather heavily on some unspecified
residual amount of thiopental and/or lidocaine, after an
unspecified period of time, if they, indeed, believe they
were maintaining general anesthesia in these patients at
the time of craniotomy.

In the absence of a proper control group, cannot one
conclude with at least equal justification that isoflurane
protects against rises in intracranial pressure in patients
whose general anesthesia is "maintained" with 70% nit-
rous oxide in oxygen, because intracranial pressure did
not increase in eight of the 14 patients studied?

If the effects of isoflurane on intracranial pressure had
been studied in a steady state, i.e., with a constant end-
tidal (rather than inspired) isoflurane concentration, would
intracranial pressure have increased in even fewer pa-

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In reply.—With all due respect, we submit that Dr.
Finck missed the stated goal of our clinical report. Adams
et al.,1 using patients with brain tumors as their own con-
trol, demonstrated quite adequately that isoflurane in-
creases cerebrospinal fluid pressure during normocar bic
steady-state anesthesia. We had no intention of simply
reduplicating their work. The purpose of our study, as
stated in the introduction, was to identify which patients
with intracranial neoplasms are at risk for developing in-
creases in intracranial pressure (ICP) during inhalation
of isoflurane, compared with those with intracranial neo-
plasms who are not at risk. Although inclusion of a control
group not receiving isoflurane might have yielded inter-
esting results, we cannot imagine how it would have aided
us in reaching a conclusion concerning a question that we
felt to be clinically pertinent.

Speaking of clinical relevance, Dr. Finck takes us to
task for not achieving steady-state conditions during the
period of time we studied the effects of isoflurane. We
submit that at the time of skin incision, most clinicians
administer anesthetics based on patients' responses rather
than numbers. In paralyzed patients it hardly matters
whether an end-tidal concentration of isoflurane sufficient
to prevent movement in one-half the patients (1 MAC)

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