

## Correspondence

Anesthesiology  
47:314, 1977

### Inhalation Sedation vs. Analgesia with Nitrous Oxide

*To the Editor:*—Dr. Cleaton-Jones is incorrect in claiming that his is the first study in which laryngeal competence was evaluated during nitrous oxide-oxygen analgesia.<sup>1</sup> We reported similar findings after administration of nitrous oxide, 25 per cent, and oxygen, or methoxyflurane, 0.35 per cent in air, in four patients undergoing dental surgery.<sup>2</sup>

Perhaps accidentally, Dr. Cleaton-Jones implied that sedation and relative analgesia are the same technique. Relative analgesia expressly utilizes the analgesic qualities of nitrous oxide, and therefore 50 per cent concentration is used. However, we have found that a combination of nitrous oxide, 25 per cent, with a relevant local anesthetic block enables treatment to be completed satisfactorily in more than 90 per cent of anxious patients undergoing dental surgery at our hospital. We call the technique "inhalation sedation" to emphasize that it is not necessary to obtain the full analgesic qualities of nitrous oxide.

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### Prolongation of Succinylcholine Block by Anticholinesterases

*To the Editor:*—I was interested to read the report of Dr. Stoelting in which he demonstrated a decrease in serum cholinesterase activity in man following administration of the anticholinesterase agents neostigmine and pyridostigmine.<sup>1</sup>

In 1966, Barrow and Johnson described similar findings for neostigmine and pyridostigmine, as well as for edrophonium and tetrahydroaminoacridine (tacrine).<sup>2</sup> Their work seems to have been stimulated by the then current use of tacrine to prolong the neuromuscular blocking effect of succinylcholine. McCaul and Robinson mentioned, in passing, that two patients with prolonged apnea following tacrine and succinylcholine had serum cholinesterase values that were 30 per cent of normal.<sup>3</sup> They did not, however, state when these values were obtained or whether "normal" referred to values measured previously in the two patients or to those for the general population. In 1961, Heilbronn showed that tacrine caused reversible inhibition of breakdown of both acetylcholine and butyrylcholine (that is, inhibition of acetylcholinesterase and serum cholinesterase).<sup>4</sup> The use of

There appears to us no reason, using our technique, to utilize more than 25 per cent nitrous oxide.

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tacrine as a serum cholinesterase inhibitor has declined since then in the United Kingdom. For a while it became unobtainable, although a number of requests have brought about its recent reintroduction.

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