Correspondence

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Ignition of an Endotracheal Tube during Laser Microsurgery

To the Editor:—We were most interested in the recent letter in which muslin-wrapping of the endotracheal tube was promoted as a means of preventing ignition of the tube during CO₂ laser microsurgery.1 We have experienced indirect ignition of foil-wrapped endotracheal tubes on two separate occasions during laser resection of tracheal papillomas.2 While moist muslin-wrapped endotracheal tubes may adequately protect against direct hits by the laser beam, the interior of wrapped endotracheal tubes readily burns when ignited indirectly by flaming pieces of tissue either in close proximity to or inhaled into the tip of the tube.3

To convince ourselves that this could indeed occur, we attempted to simulate in the laboratory the situation encountered in laser resection of tracheal papillomas. Small pieces of meat were placed 1 cm from the tip of wrapped endotracheal tubes (plastic or red rubber) through which flowed any combination of O₂ and N₂O. The pieces of meat were readily charred, then ignited, when repeatedly hit with the laser beam. When a critical temperature was reached, the endotracheal tube ignited without being directly hit by the laser beam.

In the situation where one must use the CO₂ laser in the path of gases that support combustion, wrapping of the tube does not necessarily prevent ignition. Therefore, we feel there is a pressing need for a nonflammable endotracheal tube for use in laser surgery.

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Ketamine May Exacerbate Psychiatric Illness

To the Editor:—The letter by Reames and Rosenblatt,1 while carefully worded so as not to be prescriptive, might be misleading to the average reader. They state that “Psychiatric disease per se should not be an absolute contraindication for ketamine anesthesia. Providing adequate psychotropic medications are given and the nursing staff alerted to treat promptly excitatory phenomena, ketamine can be used safely and effectively in these patients.”

While what they say is true, there are a number of important factors to which they do not address themselves.

First, since we know that ketamine does produce psychotomimetic effects in “normal” patients, it is likely to produce similar effects (as it has in this author’s experience) in schizophrenics as well. The interaction of ketamine’s organic psychosis with a pre-existing functional psychosis is unknown. I personally have seen severe exacerbations of psychosis in patients given ketamine without consideration of their preoperative psychological states.

Second, the authors do not suggest how to identify those patients who may be safely given ketamine except to say they should be receiving “adequate” doses of psychotropic medication. What is “adequate” for the psychiatric ward may not be “adequate” for the operating room, where fantasies of mutilation or death may overtake such patients.

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Third, little is known about the interactions between psychotropic drugs such as haloperidol or chlorpromazine and ketamine in the central nervous system. What is appropriate and specific treatment for functional psychosis is not necessarily protective in the case of organic psychosis.

The indication for the use of ketamine by these authors was "repeated procedures." This is, I believe, not enough of an indication, given the possible disastrous consequences of ketamine psychosis. Although their patient did not seem to fit the category, there are patients who are severely burned who come to the operating room with a "Burn Unit (ICU)-type of psychosis superimposed upon previous schizophrenia. In this author’s experience, the addition of ketamine may make the already difficult postoperative management of such patients almost impossible. Unless criteria for the safe use of ketamine in psychosis can be established or ketamine is clearly the best alternative despite severe emotional problems, its use should be proscribed in management of psychotic patients. If there is any question, a psychiatric consultant should be called in to help make the decision. Just because a patient “can be” anesthetized safely under certain conditions does not mean he should be. Let us not get caught-up in the — “All Indians walk in single file; at least the one I saw did” — approach to medical management.

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Clonidine Withdrawal, Propranolol, and Rebound Hypertension

To the Editor: — Bruce et al.1 stated that the continued presence of beta-adrenergic blockade during preoperative cessation of clonidine administration in severely hypertensive patients would aggravate rebound hypertension. They attributed this to unopposed alpha-adrenergic effects of elevated catecholamine levels resulting from clonidine withdrawal. Consequently, they recommended withdrawal of beta blockers such as propranolol before discontinuation of clonidine administration. Their guidelines, however, ignore the significant contributions that beta blockers can make to the parenteral therapy of severe hypertension.2 Other authors have used beta blockers in combination with either alpha antagonists3 or other vasodilators4 during temporary interruption of clonidine therapy. Adequate doses of phenoxybenzamine or hydralazine will minimize unbalanced vasoconstriction.

The authors also recommended the use of hydralazine as a substitute for clonidine. Reduced systemic vascular resistance during hydralazine therapy may lead to tachycardia and increased cardiac output and myocardial oxygen consumption (mediated by baroreceptor reflexes), together with renin release. These responses reduce the effectiveness of hydralazine and render it inadequate as a sole agent in the treatment of severe hypertension.5 Moreover, the agent is known to precipitate angina pectoris in hypertensive patients with coronary-artery disease.6 Beta blockers can minimize these unwanted reflex effects and thus serve as valuable adjuncts to hydralazine.

Finally, beta blockers potentiate the hypotensive effects of sodium nitroprusside, which is often used for control of perioperative rebound hypertension.7 This will significantly reduce the dose of sodium nitroprusside needed for this purpose.

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