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REPLY

The letter of Dr. Sosis gives us the opportunity to repeat once more the great advantage of the transtracheal jet ventilation technique: there is no endotracheal tube in place to act as a source of fuel for combustion. Thus the first of the three following conditions required for an endotracheal fire or explosion² has been eliminated: (a) the presence of a flammable agent or material, (b) a gas mixture which supports combustion and (c) a source of ignition of sufficient energy. In a recent survey (cited by Dr. Sosis) by Fried³ on the complications due to the use of CO₂-laser reported by 210 otolaryngologists, endotracheal explosion attributed to ignition of an endotracheal tube was the commonest.^{2,4}

We fully agree that nitrous oxide also supports combustion of an endotracheal tube. For that reason, during laser surgery, we use either a red-rubber tube wrapped with aluminium tape in a 25 per cent oxygen environment without nitrous oxide, or the transtracheal jet ventilation technique, especially when the operative field has to be fully exposed.

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Hereditary angioneurotic oedema, tracheal intubation and airway obstruction

To the Editor:

We read with interest the recent paper by Poppers,¹ in which a patient with hereditary angioneurotic oedema (HANE) underwent dental restorations and extractions under general anaesthesia. Successful tracheal intubation was performed without precipitating an acute attack. Three previous case reports of general anaesthesia with tracheal intubation were not cited by Dr. Poppers.

Hamilton *et al.* described a patient with HANE who underwent dental extractions under general anaesthesia with oral intubation.² Two units of fresh frozen plasma (FFP) were given preoperatively, and despite a history of recurrent attacks of facial swelling, one of which required a tracheostomy, there were no untoward postoperative sequelae. There is another report of a pregnant patient who required a rapid-sequence induction for urgent Caesarian section.³ FFP and chlorpheniramine were administered intraoperatively and the postoperative course was uneventful. Orotracheal intubation and halothane anaesthesia were provided for another patient undergoing parotidectomy.⁴ The patient was pretreated with ϵ -aminocaproic acid followed by a five-day postoperative course.

Life-threatening upper airway obstruction may also occur in acquired C₁ esterase deficiency, which has many similarities with HANE. Epinephrine, corticosteroids and anti-histamines do not appear to be helpful for the prophylaxis or treatment of acute attacks in either condition. Razis *et al.* describe the uneventful oro-tracheal intubation of a patient with acquired C₁ esterase deficiency who required laparotomy for mesenteric vein thrombosis, a recognised complication of tranexamic acid.⁵ A patient undergoing cholecystectomy has also been described.⁶ The anaesthetic technique is not mentioned but it is likely to have included tracheal intubation.

HANE is a relatively rare condition and reports describing the anaesthetic management are welcome. We agree that tracheal intubation should be avoided if at all possible,⁷ and that all patients should receive prophylactic therapy prior to surgery. Facilities for emergency tracheostomy and intensive therapy should be available. Attacks of angioedema are unpredictable but tracheal intubation may not be as hazardous as previously suggested.

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Defective anaesthetic breathing circuit

To the Editor:

The following experience emphasizes once again the need to always check the anaesthetic breathing circuit prior to induction of anaesthesia.

I recently encountered difficulty pressurizing a new Curity Bain Breathing Circuit after connecting it to the anaesthesia machine, closing the relief valve and starting the flow of oxygen. No gas would flow through the inner blue tube.

Further inspection of the circuit revealed a kink in the blue tube just beyond the external nipple, and inside the white tube, there was evidence of a double kink, allowing absolutely no gas flow (Figures 1 & 2).

The original Bain Circuits were designed so that the inner tube did not protrude beyond the external tube. This was felt to be unsafe, owing to the fact that the inner tube might become dislodged. However, in the above example, the circuit appeared normal externally, but

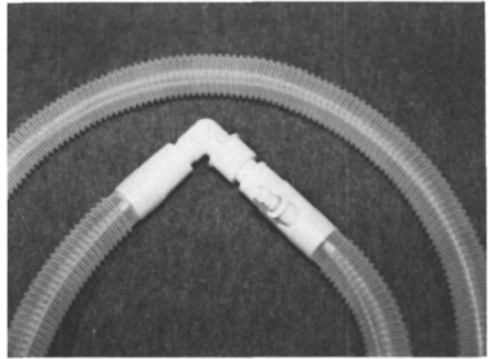


FIGURE 1 Intact circuit.

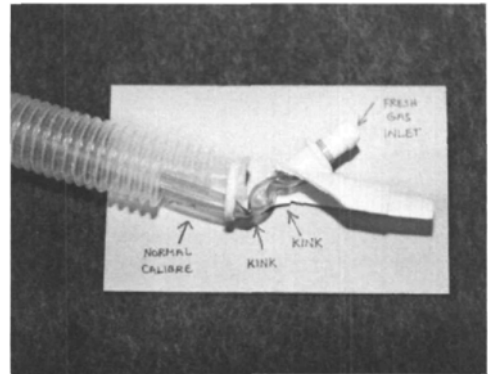


FIGURE 2 Kinked inner tubing.

excess tubing on the inside caused the kinking, and a possible disastrous situation.

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REPLY

Thank you for the opportunity to respond to the letter by Dr. Forrest. According to the letter, there was a "kink in the blue tube just beyond the external nipple and inside the white tube. After cutting the external white tube there was evidence of a double kink, allowing absolutely no gas flow."