LETTERS TO THE EDITOR

SIR,

The article by Drs. Calverly and Jenkins (C.A.S.J. Vol. 20, #5) gives an excellent though rather frightening account of anaesthesia for pelvic laparoscopy, as this procedure is frequently carried out. The surgical technique of the procedure has, however, been greatly simplified at the St. Thomas Elgin General Hospital by Drs. W.G. Sloan and D.W. Lawrence. The full description of their technique was presented with film, at the American Society of Laparoscopists in St. Louis in November of 1973. Essentially they do not use the Verres needle to fill the abdomen with CO₂. The trocar of the laparoscope is inserted through a small incision at the lower edge of the umbilicus and the abdomen filled after direct vision has confirmed that the peritoneum has been entered. The operating laparoscope is then used. In it the forceps are passed along the laparoscope rather than via a farther incision through the abdominal wall. By utilizing this approach it has been found that only 1 litre of CO₂ is required in most patients, with a few obese ones requiring 1½ litres. Much of this is released at the end of the procedure. With this small volume of CO₂ none of the complications attributed to pneumoperitoneum or CO₂ absorption constitute a problem.

The degree of trendelenberg also has been lessened and varies from 5 to 15 degrees. The patient is placed in this position prior to insertion of the trocar. Since the problems caused by the head down position are to a large extent proportional to the degree of tilt this set of complications is also reduced.

The safe insertion of the trocar requires that the whole abdominal wall be picked up in one hand of the surgeon and one hand of the scrub nurse. The anaesthetists must therefore provide sufficient relaxation to permit this. Generally a burst of succinylcholine I.V. or 60 mg gallamine I.V. is adequate. Because of the small quantity of CO₂ used, fluothane is no longer considered contraindicated. It has not been our practice to connect the patient to an oscilloscope routinely but no serious arrhythmias have been noted.

Adoption of this simplified system has thus greatly reduced the anaesthetic hazards. Our usual anaesthetic time for laparoscopic sterilization is 20 minutes, with an operating time of less than 10 minutes. The patients feel well after the procedure and for laparoscopic sterilization, are admitted between 0700 and 0800 hours and discharged about 1300 hours the same day. The most frequent complaints have been muscle pains from succinyl choline and sore throat from intubation. Over 1,300 cases have been handled in this fashion in the last 3 years with minimal complications and only 4 re-admissions. The procedure carried out in this fashion has become so benign that, except for obesity, it is frequently carried out as the procedure of choice in the cases listed by Calverly and Jenkins as contraindications, as it avoids the more hazardous laparotomy.

D.H. ADAMSON, M.B., CH.B., F.R.C.P.(C)

DEAR SIR,

In our review of the management of anaesthesia for pelvic laparoscopy, we described the surgical technique employed at our institution and several other Canadian centers. Dr. Adamson has reported that the surgeons of his hospital have evolved an alternate technique which permits more latitude in anaesthetic management. If laparoscopists accept this simpler approach, few anaesthetists will mourn the passing of the more radical procedure. Until that time, however, we feel obliged to maintain a prudent approach in anaesthetic technique and monitoring.

RODERICK K. CALVERLEY, M.D.

DEAR SIR,

In his paper "A Comparison of Venturi and Side Arm Ventilation in Anaesthesia for Bronchoscopy,"¹ Dr. Carden clearly demonstrates that the blood gases obtained in some patients when using the Venturi technique are unacceptable. His results are in accord with those published by Komesaroff & McKie in 1972 using the "Bronchoflator."²

However, in our experience, when using the Negus Bronchoscope, the blowback of oxygen into the surgeon's face with the Sidearm technique was unacceptable to the surgeons. We then decided to steer a middle course between the Sidearm and Venturi techniques. After 3 years' experimentation, it was found that by welding a 7 cm long 11G tube along the inner aspect of the bronchoscope and thereby replacing the usual gas inlet, high PaO₂ and normal or low PaCO₂ levels were obtained without the blowback into the surgeon's face.

In the Störz fiberoptic bronchoscope, the suction inlet tube is fortuitously of similar dimensions to the tube described above, and it has proved to be a convenient alternative for attaching the low pressure line of the "Bronchoflator."

The selection of the "Bronchoflator" or Sidearm technique is one of personal or surgeon preference. However, there is no valid reason for continuing the Venturi technique, as the blood gas studies by Carden and ourselves have demonstrated dangerously low PaO₂ values in some patients.

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¹CARDEN, E., BURNS, W.W., McDEVITT, N.B., & CARSON, T. A Comparison of Venturi & Sidearm Ventilation in anaesthesia for bronchoscopy. *Canad. Anaesth Soc. J.* 20: 569 (1973).

²KOMESAROFF, D. & MCKIE, B. The bronchoflator: a new technique for bronchoscopy under general anaesthesia. *Brit. J. Anaesth.* 44: 1057 (1972).

SIR,

I was interested to read the paper "Laboratory Animal Anaesthesia" by A.J.C. Holland in *Canad. Anaesth. Soc. J.*, vol. 20, No. 5, September, 1973. I am in no position to assess the standard of veterinary anaesthesia practised in Canada but

if the author intended his paper to have global interpretation then in my capacity as President of the Association of Veterinary Anaesthetists of Great Britain and Ireland I must take exception to his remarks that the writing of the article was prompted by "the relatively low standard of veterinary anaesthesia practised, together with the wide variety of animals which are now being anaesthetised in laboratories and veterinary hospitals" and his conclusion that "most veterinarians have not had the necessary formal training in physiology and pharmacology to assess their anaesthetic agents and techniques realistically." Supervision in the British Isles of undergraduate veterinary courses in physiology and pharmacology, and also in anaesthesia, is such as to ensure that British graduates *do* have the necessary formal training to allow them to assess realistically the agents and techniques available. Furthermore, the speciality of veterinary anaesthesia has been developed to a very high level by the introduction of the Diploma in Veterinary Anaesthesia by the Royal College of Veterinary Surgeons and an important aspect of its examination syllabus relates to anaesthesia of laboratory animals.

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SIR,

I regret that Mr. Mitchell should have taken umbrage at some of the remarks made in my article on Laboratory Animal Anaesthesia.

The Diploma of Veterinary Anaesthesia is, I know, a prestigious degree, and if all laboratory animals throughout the world were anaesthetized only by its possessors then there would have been no point in my writing at all; unfortunately such a happy state of affairs does not exist and is not likely to.

It has been my experience (in Australia, England, Scandinavia and North America) that the vast majority of laboratory animal anaesthesia is not performed by specialist veterinary anaesthetists and that, in fact, a significant proportion is performed by people with no medical or veterinary training whatsoever.

It seemed, I thought, fairly clear that my article was intended for the non-professional veterinary anaesthetist as a guide both to techniques and to intelligent thinking about the subject. Since publication of this article, the comments and the requests for reprints on it suggest that it has indeed filled a gap and that many have obtained useful information from it (even some English veterinarians).

To know that the undergraduate training of British veterinarians is such that they can assess realistically the agents and techniques available to anaesthetize many species of animals is a very pleasant surprise. Their intellectual capacities must greatly exceed that of medical students, who at the end of their under-

graduate course are usually incapable of anaesthetizing safely just one species, *homo sapiens*, and thankfully realize it.

Without therefore wishing to be discourteous to Mr. Mitchell, and realizing that many veterinary anaesthetists throughout the world are exceptionally good, I can only reiterate in the light of my own fairly extensive experience that the vast majority of laboratory animal anaesthetics performed, whether by veterinarians, doctors, or technicians, are of a relatively low standard; it is wishful thinking to believe otherwise and it will take a great deal more in the way of lecturing, writing and example before the standards of laboratory animal anaesthesia are as high as Mr. Mitchell and I would both like to see.

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