*mindful of the implications of applying current standards of the peer-review process and publication rights to the Internet.*

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## *MAOIs and anaesthesia*

To the Editor:
Patients receiving monoamine oxidase inhibitors (MAOI's) are prone to adverse interactions with other drugs, notably meperidine and indirect acting sympathomimetic agents. Anaesthetic related drugs may also be implicated.

There is no current, comprehensive database upon which to base a decision regarding the discontinuing of MAOI's prior to surgery. In order to create such a database I have sent a questionnaire to all practising anaesthetists in Canada. It is my intention to submit a yearly report to the Canadian Anaesthetists' Society.

I write to increase awareness of the questionnaire amongst Canadian anaesthetists, in order to enlist their help in its completion. I am grateful for the opportunity of so doing. Further copies of the document can be obtained by writing to the address given below.

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## *Xenon is another laughing gas*

To the Editor:
There is concern that inhalation of $N_2O$ may cause teratogenic effects,[1] and spinal cord symptoms.[2] Xenon does not undergo biotransformation and is non-toxic,[1] and is a more potent anaesthetic agent than $N_2O$) (MAC is 71% in humans.[3]) As xenon has a smaller blood/gas partition coefficient (0.20) than $N_2O$) (0.47), it provides rapid induction and recovery from anaesthesia.[4] It is expensive but costs may be minimized by using a minimum fresh gas flow in a closed circle system.[5]

We compared changes in the electroencephalogram (EEG) and electromyogram (EMG) during inhalation of xenon and $N_2O$. Seven healthy volunteers (male/female = 6/1; age 36 ± 4 yr; weight 61 ± 5 kg), with informed consent and approval by our institute, inhaled each anaesthetic gas in a random order at seven-day intervals. The EEG at frontal, temporal and occipital regions and the EMG at periocular and buccal muscles were continuously recorded using a Neuropack Four (Nihon Kohden). Xenon or $N_2O$ in oxygen was administered via face mask by using a minimum fresh gas flow in a closed circle system. The end-tidal concentration of each anaesthetic gas was gradually increased and maintained for each ten minutes at 0.33, 0.5 and 0.66 MAC in turn. End-tidal concentrations of xenon and $N_2O$ were monitored using a thermal conductivity gas monitor (Thermomat, Fuji Electric) and a Capnomac (Datex), respectively.

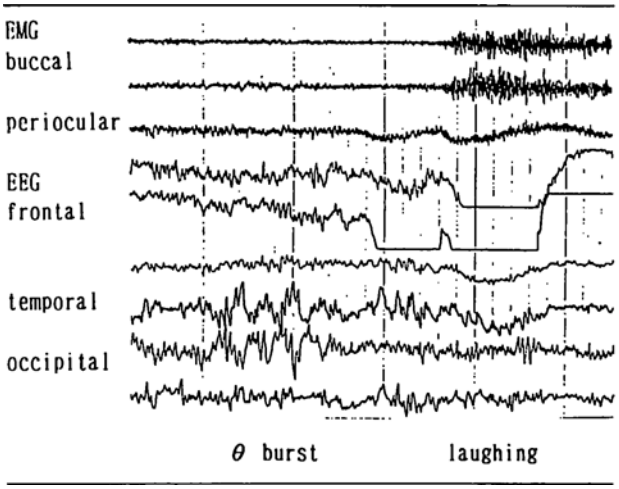


FIGURE The EEG and EMG changes when the subject started laughing during inhalation of xenon at 0.66 MAC (47%).

The EEG changes were similar with xenon and $N_2O$. The attenuation of α wave and slight decrease in frequency of basic rhythm were observed at 0.33 and 0.5 MACs of xenon and $N_2O$. Slow α and θ waves were observed at the higher MAC of 0.66 with both anaesthetics. When subjects inhaled xenon or $N_2O$, the remarkable change was an appearance of laughing at 0.66 MAC which was confirmed with the EMG change (Figure). Laughing was observed in 2/7 with xenon and 5/7 with $N_2O$ (no significant difference between incidences with two anaesthetics). Xenon is an another laughing gas.

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## *Epidural catheter connector*

To the Editor:
I read with great interest the letter by Drs. McIntyre and Kuwahara.[1] However, I cannot endorse the logic of using a butterfly needle because as the work was carried out in children, it may not be ideal. The value of the butterfly needle as an alternative paediatric epidural catheter connector in children has not been questioned, but there may be some dangers. One wonders how practical it is to have a sharp tip needle inside a catheter. Despite proper fixation, children are often restless and needle-stick injury[2] may be inevitable or there may be damage of the catheter which will invite infection and leakage. The increasing interest in continuous epidural blockade is remarkable. The availability and adaptability of various devices such as *iv* cannulas are considerable, which may substitute not only for paediatric epidural catheter connectors but also in adults. The hub of the *iv* cannula accepts any type of Luer-lock connection.

An appropriate size of an *iv* cannula fixed firmly inside the proximal end of the catheter and withdrawal of the needle will solve connector-catheter related problems.

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1 *McIntyre DR, Kuwahara B.* Paediatric epidural catheter connector problems [Letter]. Can J Anaesth 1991; 38: 544.
2 *Jagger J, Hunt EH, Brand-Elnaggar J, Pearson RD.* Rates of needle-stick injury caused by various devices in a university hospital. N Engl J Med 1988; 319: 284–8.

### *REPLY*

*Dr. Alam raises a theoretical concern about needlestick injury when using a butterfly infusion set as a connector for epidural catheters in children. In reality, needlestick injury does not occur when suitable care and attention are directed to protecting the needle and the butterfly. We have used this type of connection for all of our epidural catheters at the Alberta Children's Hospital over the past 5 years, and not one of our patients has experienced a needlestick injury of the described type.*

*The needle is protected using a plastic sheath and the butterfly is wrapped in a gauze and plastic dressing, as we described in our initial communication.[1] We place a gauze dressing on the chest, the needle on top of the gauze and a plastic Tegaderm® dressing over the top of the needle.*

*We have had catheter disconnects with subsequent leakage of infusate but as mentioned in the original communication the incidence of this is far less than with the previous Tuohy crimp on style connector. Others have described alternative solutions with the use of tape[2] or glue.[3]*

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## *Augustine guide*

To the Editor:
In their evaluation of the Augustine guide, Carr *et al.*[1] graded laryngoscopic views according to Samsoon and Young's modification of Cormack and Lehane's scheme,[2,3] stating "During direct laryngoscopy, the vocal cords and laryngeal inlet could not be seen (Cormack and Lehane grade IV)..." In fact, not seeing the vocal cords is grade III, grade IV being reserved for a hidden epiglottis:

> Grade 2. If only the posterior extremity of the glottis is visible... Grade 3. If no part of the glottis can be seen, but only the epiglottis... Grade 4. If not even the epiglottis can be exposed... This situation is well recognized where there is obvious pathology, but is exceedingly rare if the anatomy is normal.[2]
>
> Grade II, only posterior commissure visible; grade III, only tip of epiglottis visible; grade IV, no glottis [*sic*] structure visible.[3]

Additional confusion stems from downplaying the difference between the *glottis* (vocal cords and intervening opening) and the *laryngeal inlet* (oblique aditus including the upper border of the epiglottis, arycpiglottis folds containing the corniculate and cuneiform cartilages, and mucosa covering the arytenoideus muscle).[4]

Though the incidence in apparently normal patients of grade IV approximates < 1/100,000,[2] 17/27 of the current group had grade IV views, eight of them unanticipated. Even if Cormack and Lehane overstated by a factor of 10 the rarity of grade IV, a population of 80,00 would be necessary to turn up eight patients so difficult. If each of the four participants intubated the tracheas of 1,000 patients annually, trials would seem to have had to extend back to the mid-70s! The Augustine Guide was introduced in 1993.

Parenthetically, was intubation attempted with straight blades, and was optimal laryngeal pressure combined with laryngoscopy before resorting to the Augustine Guide?

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