

CORRESPONDENCE

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In Reply:—Thank you for your interest in our publication, "Oral Transmucosal Etomidate (OTET) in Volunteers."¹ We agree that oral administration may be an effective route of etomidate administration. As noted in our article, it was impossible to distinguish how much absorption of etomidate from OTET occurred *via* the transmucosal route *versus* the gastrointestinal route. Further study is needed to elucidate this. However, work with animals in our lab has shown that etomidate is highly permeable through the canine buccal mucosa.² It is likely that a significant proportion of etomidate from OTET will be absorbed by the transmucosal route. Therefore, we would expect the onset of effect to be quicker with OTET compared to the oral solution. Again, this hypothesis needs further study. We agree with Dr. Lauretti that etomidate is distasteful. We noted in our article that the taste of OTET became significantly worse with increasing dose. Further development of OTET will necessitate flavor modification.

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Skin Vasomotor Reflex as a Measure of Depth of Anesthesia

To the Editor:—We read with interest the article by Shimoda *et al.*¹ that describes a new technique for assessment of automatic reactivity during laryngoscopy and intubation.

The authors showed that skin vasomotor reflex amplitude (measured by a laser-Doppler flowmeter) significantly correlates with the systolic blood pressure changes during laryngoscopy. The same vasomotor reflex was used by Ikuta *et al.*² as an objective indicator to assess the level of regional anesthesia.

We used the same principle by measuring the amplitude of the plethysmographic wave from a pulse oximeter as a simpler and cheaper method to assess the depth of anesthesia.

The monitor we used (Model POET, Criticare, USA) has the advantage of quantifying the amplitude of the plethysmograph wave from 0 to 5. During short gynecologic procedures (50 consecutive patients undergoing dilatation and curettage) during general anesthesia with intermittent boluses of fentanyl and propofol, an increase in the amplitude of the wave to 4-5 from 0-1 was equivalent to "deep" anesthesia and the procedure was started. Usually during the dilatation of the cervix, a decrease in the wave of the plethysmograph was an indication of inadequate anesthesia, and, if the preanesthesia amplitude was reached, patient movement, increase in blood pressure, and heart rate, or all of them were consistently present. A supplemental dose of propofol was added until a higher amplitude of the wave was achieved.

By using this method, we were able to prevent hemodynamic response and patient movement by administration of early boluses of propofol. In 48 of 50 patients (96%), the method was reliable in assessing anesthetic depth. The two remaining patients had signs of

hypovolemia caused by uterine bleeding, making the method unreliable because of peripheral vasoconstriction.

In conclusion, skin vasomotor reflex may reflect not only the autonomic reactivity to nociceptive stimuli, but it may also serve as a quantitative intraoperative assessment of the degree of analgesia.

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