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In Reply:—Thank you for the opportunity to comment on the report by Ezri *et al.* and their very interesting observations. We are gratified with the concept "anesthesia management by evaluating autonomic reactivity," because it may provide important information regarding the depth of anesthesia, as Dr. Anderson pointed out.[1]

Laser–Doppler (LD) flowmetry measures superficial cutaneous microcirculation under the probe, whereas plethysmography evaluates changes in the whole blood volume in the finger. The basic wave in LD skin blood flow wave is coincident with the simultaneously recorded baseline fluctuation in the plethysmographic wave.[2] It has not been confirmed whether a linear, quantitative correlation exists between the amplitude of the skin vasomotor reflex measured by LD flowmetry and the pulse amplitude of the plethysmography. The report of Ezri *et al.* suggests that the changes in the pulse amplitude of plethysmography may also reflect sympathetically mediated vasomotion. Any progress toward an inexpensive and simpler autonomic monitor will prove to be beneficial to the spread of patient-by-patient-based anesthesia management.

Analyses of pulse waves (*e.g.*, arterial blood flow, LD skin blood flow, and plethysmography wave) have a common weak point. For example, anesthesia induction with propofol and anaphylactoid reactions increases the pulse amplitude of the plethysmography and LD skin blood flow. This problem has limited the application of pulse wave analysis in assessing the depth of anesthesia. For reducing this problem, we prefer to evaluate autonomic reactivity using a known quantitative stimulus before anesthesia, surgical procedures, or both, rather than to evaluate the changes in autonomic indicators induced by the procedures.

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Displacement of Double-lumen Tubes after Patient Positioning

To the Editor:—The recent article by Klein *et al.*[1] was very enlightening in showing the high incidence of malpositioned double-lumen tubes (DLTs) after blind intubation and patient positioning. They suggested that routine bronchoscopy is recommended after intubation and after patient positioning. We agree with Klein et al.[1] that malpositioning of DLTs is a serious problem, and fiberoptic bronchoscopy definitely is helpful in confirming DLT position. However, we take exception to their recommendation that the routine use of bronchoscopy is a diagnostic and therapeutic tool in placing DLTs. We agree with Brodsky,[2] Burk,[3] and Grum[4] that fiberoptic bronchoscopy is an adjunct that can be used to improve care when necessary in special cases.

Before publication of the article by Klein *et al.*,[1] we performed a similar study of DLT displacement after patient positioning in 80 patients undergoing elective thoracotomy requiring left DLT placement.[5] Fiberoptic assessment was used to confirm DLT positioning and to measure the distance of displacement. Our results showed that after patient positioning, there were 52.5% tube displacements, and all were proximally malpositioned. Our method differs from that of Klein *et al.*[1] in that we purposely placed the bronchial cuff closer to the upper lobe orifice before patient positioning. A discrepancy of approximately 1 cm was seen compared to the method of Klein *et al.*[1] We thought that because a majority of tube displacements after patient positioning are proximal, a more distal initial placement allows the tube to be placed in the correct position as it was withdrawn proximally during patient positioning. Furthermore, it is always easier to pull out a malpositioned tube than it is to advance it forward.

In the past 10 years, we performed more than 3,000 cases of DLT placement in our hospital using this approach. Our experience has been that fiberoptic bronchoscopy is seldom necessary if continuous vigilance is given to bilateral auscultation, bronchial cuff palpation, and observation for the changes in airway pressure.

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