

CORRESPONDENCE

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In Reply:—We greatly appreciate Dr. Zemenick's interest in our recent work. He is concerned that lidocaine only attenuates bronchial hyperreactivity in a subpopulation of patients who respond to a histamine challenge and that lidocaine might cause bronchoconstriction. His hypothesis is based on studies that describe bronchoconstriction after lidocaine inhalation.

We agree that lidocaine administered as an aerosol can initially induce bronchoconstriction in asthmatic patients, as is shown in another recent study from our laboratory.¹ Nevertheless, lidocaine inhalation subsequently attenuates the response to several different challenges such as methacholine, hyperosmolar saline, distilled water, or exercise.²⁻⁵

However, our study⁶ addressed intravenous, not inhalational, lidocaine. Airway irritation was only described after lidocaine inhalation. In contrast, after intravenous lidocaine administration, we saw only a variation in individual measurements of forced expiratory volume in 1 s compared with the respective baseline of less than 3% of 15 subjects. In general, we have never observed airway irritation after intravenous lidocaine administration; it is not reported in the literature, and it is not likely to occur.

In fact, in dogs with hyperreactive airways, intravenous lidocaine completely blocks initial airway irritation by lidocaine aerosol as demonstrated by high-resolution computed tomography scans.⁷ Furthermore, intravenous lidocaine also abolishes the response to mechanical stimulation (suctioning) in patients during general anesthesia without any report of adverse effects.^{8,9}

Finally, the aim of our study⁶ was not only to report the protective effect of intravenous lidocaine on hyperreactive airways (this has already been performed, and the use of intravenous lidocaine is recommended in review articles and standard textbooks), but to compare the magnitude of this effect under standardized conditions with an inhaled sympathomimetic drug (salbutamol) and to evaluate the effect of combined lidocaine and salbutamol administration. With respect to both our results and the literature, it is fully justified to recommend the combined use of intravenous lidocaine and salbutamol to prevent reflex bronchoconstriction.

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