Use of Antisialagogues in Bronchoscopy

To the Editor:

In their recent article in CHEST (August 2009), Malik et al. suggest that use of anticholinergic premedication may reduce airway secretions during bronchoscopy but not cough, patient discomfort, oxygen desaturation, or procedure time. However, a review of their data does not truly support a clinically important difference, even for secretion reduction.

We found the design of their study to be strikingly similar to our initial randomized, double-blind, placebo-controlled study of atropine and glycopyrrolate published in 2000 within this same journal (July 2000). The only real difference between our study and the Malik study published 9 years later was the total number of patients enrolled; in fact, the findings are nearly identical. We designed our initial study to have 80% statistical power ( β ) of detecting a 12% difference between the mean values recorded on a visual analog scale for the primary end point of control of respiratory tract secretions. This difference was estimated to be the minimum required to make the use of these medications clinically important. To achieve this level of power, approximately 210 patients were calculated to have been required for the study, 70 in each group. Although Malik and colleagues enrolled 1,000 consecutive patients who were eligible, they unfortunately did not report the level of statistical power to which they designed their study. If they did, one would likely see that the minimal difference in visual analog scale scores reported was barely statistically significant, and hardly clinically generalizable.

In summary, there is now a multitude of published data demonstrating that administration of antisecretory drugs prior to bronchoscopy does not reduce procedure times, does not result in clinically significant differences in cough or secretion control, and in some cases may actually result in clinical harm. Its routine use should be abandoned.

Response

To the Editor:

We thank Dr Cowl for his interest in our article recently published in CHEST (August 2009). Anticholinergic premedication continues to be used during bronchoscopy at many centers despite no clear evidence of benefit and potential for harm. Therefore, we felt the need to more clearly investigate the role of such medication. Inevitably, our study had to have several similarities in design with some previous studies in this regard, including one by Cowl et al. However, as acknowledged by Dr Cowl, our study involved a larger number of patients from a different population, which increases the generalizability of conclusions on the subject matter. In addition, we investigated the differences in the main outcome measures after adjusting for potentially confounding variables, which was not done in the earlier studies.

Although, as pointed out by Dr Cowl, a prior power calculation was not performed in our study, this limitation would be unlikely to have affected the conclusions drawn from the study. We observed that in unadjusted comparisons there was a borderline-significant difference in the bronchoscopist-assessed airway secretions between patients receiving anticholinergic premedication and

References


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