

LETTERS TO EDITOR

In Reference to “Nebulized Bronchodilators Instead of Metered-Dose Inhalers for Obstructive Pulmonary Symptoms”

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I read with great interest Moriates and Feldman’s article advocating inhalers in obstructive disease.¹ Although I agree with the main thoughts of their argument, there are issues for consideration.

Patient education on proper inhaler use is needed, and Press et al.² offer hope of improvement. However, as acknowledged by Press et al., with any skill, it is unclear whether mastery is retained long term. Molimard et al.³ found inhaler misuse occurring in the outpatient setting, suggesting this may be an ongoing problem, or that some patients may be unable to master this complex skill.

Inhaler therapy is recommended due to the benefits mentioned by the authors. However, discharge planning should focus more on appropriate device selection. Mahler et al.⁴ identified patients with chronic obstructive pulmonary disease with a suboptimal peak inspiratory flow rate in whom use of an inhaler might be ineffective. A subsequent study in this population demonstrated significant improvements in forced expiratory volume in 1 second, total lung capacity, and inspiratory capacity with nebulizer therapy compared to a dry powder inhaler.⁵ Other high-risk populations may include patients with

neuromuscular disease or impaired manual dexterity (eg, Parkinson’s, poststroke) inhibiting proper inhaler use.

Therefore, although metered-dose inhaler therapy is preferred over nebulized therapy, I would caution too sweeping a recommendation missing certain populations with “a reason” for alternative delivery.

References

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The Authors Reply “Nebulized Bronchodilators Instead of Metered-Dose Inhalers for Obstructive Pulmonary Symptoms”

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We certainly agree with Dr. LaBrin that there are a minority of inpatients and outpatients who might benefit from nebulizer therapy. In our review article,¹ we attempted not to make a sweeping generalization, even if we did not explicitly mention some chronic obstructive pulmonary disease patients with suboptimal peak inspiratory flow rate (PIFR) or those with neuromuscular disease as populations where nebulizer therapy may be preferred. Our recommendation included this statement: “Inpatient use of nebulizers may be more appropriate than metered-dose inhalers (MDIs) for patients with dementia or altered mental status, as well as those in extreme distress resulting in an inability to coordinate inhaler usage. Very low health literacy may be an additional barrier to appropriate MDI teaching and usage.”¹ Our list was not all-inclusive, and patients with suboptimal PIFR or with neuromuscular disease are good additions to this recommendation.

As for proper MDI technique, it is unclear whether MDI teaching will result in long-term mastery of the skill.² The only way to master a skill is to practice it. Thus, by prescribing MDIs and training patients on their proper usage during every admission, we will provide medically appropriate patients with many opportunities to practice the skill and reinforce effective techniques.

References

1. Moriates C, Feldman L. Nebulized bronchodilators instead of metered-dose inhalers for obstructive pulmonary symptoms. *J Hosp Med.* 2015;10(10):691–693.
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