Proper use of aerosol delivery devices. Importance of the correctness of the message that health-care professionals and scientific journals transfer

Dear Editor,

During last years, emphasis has been made on the important role played by media (e.g. scientific journals) and medical professionals in repeatedly instructing and monitoring patients for the optimal use of inhaled medication delivery devices. Current treatment strategies for asthma and chronic obstructive pulmonary disease (COPD) emphasize the role of self-administered inhalation therapy1,2. Nevertheless, patients often misuse aerosol delivery devices, particularly MDIs. A comprehensive educational program can significantly increase the use of inhalational therapy. Patient and caregiver education remains the best solution to correct patient errors in use aerosol delivery devices yet part of health-care professionals lack rudimentary skills with these devices and many lack elementary theoretic knowledge about their use3,4.

Scientific journals produced and still produce great efforts in the educational program for the correct use of aerosol delivery devices. Moreover it’s necessary to beware of the correctness of the message provided to the readers. An example is the article recently published on the New Eng J Med: “Interactive medical case – A crazy cause of dyspnea”5. In this article there is a video about “Learn more about the correct use of an inhaler” (sealed lips technique, authors note). In this video there are two mistakes. The first one: the patient doesn’t shake the MDI before inhaling the metered dose of the drug. The second mistake is that the inhaler is placed incorrectly: the patient places the inhaler on pursed lips with a wrong angulation so that the inhaler releases the medicine on the roof of the mouth.

Using the MDI correctly (Figure 1) means the drug has a better chance to reach the small airways. This increases effectiveness and reduces the side effects of medications6. The correct sealed lips technique is:

1. Remove the cap from the MDI and shake well;
2. Breathe out all the way;
3. Put MDI in your mouth, between your teeth, tongue flat under the mouthpiece, with lips sealed;
4. As you start to breathe in slowly, press down on the canister one time;
5. Keep breathing in as slowly and deeply as you can until your lungs are completely full;
6. Hold your breath for 10 seconds (count to 10 slowly) or, if less, as long as possible, to allow the medication to reach the airways of the lung;
7. Repeat the above steps for each puff ordered by your doctor;
8. Wait about 1 minute between puffs;
9. Rinse your mouth out after you take your last puff of medicine. Make sure you spit the water out; do not swallow it. Rinsing is only necessary if the medicine you just took was a corticosteroid;
10. Replace the cap on the MDI when finished.
Pointing the inhaler upwards on to the roof of the mouth or downwards on to the tongue are common errors to be avoided.

The metered dose inhaler must be taken at a 90° angulation. In this way the medicine will reach the oropharyngeal tract and penetrate efficiently in lower airways if the patient breaths slowly and deeply.

Many patients use their MDIs incorrectly because of poor advice.

Poor adherence should always be considered a potential problem that needs to be addressed at follow-up visit, particularly if disease control is poor. Great attention must be given to the informations provided to patients by health-care professionals and especially by scientific journals, as they are not always infallible.

References


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