



Misuse of inhalers devices in clinical practice

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Abstract

In COPD, therapeutic success depends on a correct inhalation technique, and the choice of inhaler devices (ID) can be as determinant as the drug itself.

We present the preliminary results of an ongoing prospective cross-sectional study aimed to assess the patient's inhaler technique in COPD patients, diagnosed according to GOLD guidelines. We defined a check-list with five steps for each ID, for a correct inhalation technique, as well as essential steps and critical errors, and patient were asked to demonstrate their inhaler technique. A statistics analysis was then performed.

We studied 203 COPD outpatients over 40 years-old (median 67,16 years), performing a total of 336 inhalations (30,4% incorrect). Ten types of IDs were examined, and misuse access according to priming/loading and inhalation procedures. Misuse ranged from 27,6% for soft-mist inhaler to 50,0% for pMDI, and in DPIs group from 0% for Aeroliser® to 48,3% for Handihaler®. Preference reasons for an inhaler were the ease of use (39,8%), their characteristics (25,2%) and seem more practical to use (25,2%). No significant relationship was found between correct use and patient preference ($p=.236$). There was also no significant relationship between the correct use and the number of inhalers used per patient ($p=.531$).

Despite technological advances, inhalers mishandling remains an important clinical issue. A good inhalation technique depends on the type of ID. Poor coordination and inhalation failure remain cause of pMDI misuse. Soft-mist inhaler is the type of ID with the low rates of incorrect use. Misuse was not associated with multiple inhalers use nor to patient' preference.

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