

6th International Conference on

CHRONIC OBSTRUCTIVE PULMONARY DISEASE

May 17-18, 2018 Tokyo, Japan

COPD: Efficacy of a Single Educational Intervention in Improvement of Inhalation Technique

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Objectives: In COPD patients, inhalers mishandling remains an important clinical issue. The objective is to evaluate if inhalation technique may improve after a single intervention education.

Methods: COPD out-patients diagnosed according to GOLD criteria, were recruited consecutively. In a previous visit, participants were invited to demonstrate the use of their prescribed in Inhaler Devices (ID). For each ID we defined a checklist of steps for a correct inhalation technique and critical errors which are likely to make therapy useless. After this evaluation, demonstrations and training with placebo inhalers were given to all participants, until a correct use is achieved. After 10 to 12 months a re-evaluation was done by the same healthcare professional using the same check-list. Patients using different ID were excluded. A statistical analysis was performed using SPSS Statistics for Windows.

Results: The study involved 170 subjects (mean age = 66.81 years, 78.2% males) performing 266 inhalation manoeuvres with 10 different IDs. An improvement in number of critical errors was observed in 18.8% and a worsening in 7.9% of demonstrations. There was an observed improvement in all types of IDs, however only sDPI inhalers group presented statistical significance (p=.012). An improvement in number of critical errors was not significantly related to demographic or clinical characteristics as age (p=.121), gender (p=.331), education level (p=.379), income (p=.965), smoking history (p=.752), level of dyspnoea (p=.474), acute exacerbations (p=.472) and airflow limitation (p=.694).

Conclusions: Some improvement of inhalation technique was achieved after a single education intervention in all types of IDs. Statistical significance was obtained regarding the type of inhaler device but not for patients' demographic or clinical characteristics.

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Biography

António Duarte-de-Araújo is a senior pulmonologist working in Guimarães' Hospital, a teaching health care unit in the North of Portugal. Is also investigator in ICVS (Life and Health Sciences Research Institute), School of Medicine, University of Minho, Braga, Portugal. COPD is his field of expertise, developing clinical investigation in the last 3 years.

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