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Association between the beliefs about inhaled medication and inhalers mishandling in COPD outpatients

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Objectives: In COPD patients, inhalers misuse is a common problem in real life. The objective is to evaluate if the patients' beliefs about inhaled medication are associated with inhaler technique.

Methods: COPD out-patients diagnosed according to GOLD criteria, were recruited consecutively. A survey of demographic and clinical data and the cross-cultural adaptation of the Beliefs about Medicines Questionnaire (BMQ-specific) into Portuguese was applied. Participants were invited to demonstrate the use of their Inhaler Devices (ID), and inhalation technique was accessed by using previous defined checklists of steps for a correct in halation technique. Errors considered critical were likely to make therapy useless. Ability to use inhalers was defined as the quotient between the number of inhalers without critical errors and the total number of inhalers used. A statistical analysis was then performed with linear regression modelling.

Results: The study included 250 subjects (mean age = 66.64 years, 76.4% males) using 10 different IDs. Misuse due to critical errors were observed in 47.4% of the women and 33.5% of men, in a total of 92 patients. In this group there was a statistical significant correlation between the BMQ Necessity score and number of critical errors (r = -.289) or the ability to use IDs (r = .310). The patients' beliefs about the necessity to use IDs were respectively significant direct and inverse predictors of ability to use inhalers ($\beta = .310$; p = .003; r2 = .096) and misuse due to critical errors ($\beta = -.289$; p = .005; r2 = .084). In this group of patients the beliefs about inhalers' need account for 9.6% of the observed variance in the ability to use their IDs.

Conclusions: Physicians should focus their attention on patients who inadequately use inhalers and take in account their beliefs about the need of inhaled medication.

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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