

Visual analog scale for assessing the perception of short-acting β 2-agonist use in clinical practice

Sir,

Asthma is a disorder characterized by episodes of reversible bronchial obstruction that accounts for airway inflammation, bronchial spasm, and bronchial hyper-reactiveness.^[1] At present, the control of asthma is considered the cornerstone goal in the management strategy. The Global Initiative for Asthma (GINA) guidelines propose three asthma control levels: well-controlled, partly controlled, and uncontrolled.^[1] The assessment of asthma control is based on some simple parameters, including the use of short-acting β 2-agonists (SABAs) and symptoms. As a matter of fact, SABA is indicated in all asthma-severity grades as it is considered the “asthma reliever by definition.” In clinical practice, SABA use might be envisaged as the “thermometer” of asthma. However, it is demanding to precisely account for the actual SABA use in clinical practice. Hence, a clinical diary may be

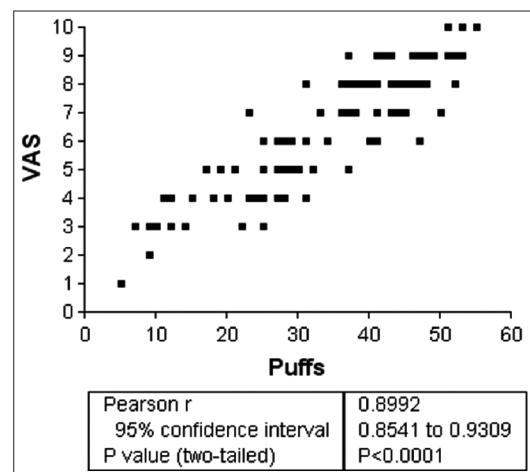


Figure 1: Relationship between number of taken short-acting β 2-agonists puffs and visual analog scale score assessing the perception of their use

supplied to the patients for recording the SABA use on a weekly or monthly basis. However, this opportunity could be difficult to pursue because the practical experience suggests that the patients are frequently negligent in correctly compiling a diary.

On the other hand, the visual analog scale (VAS) is a psychometric test that is fruitful for assessing the patient's perception of pain and symptom severity.^[2] The validity of VAS was previously evaluated in the measurement of the breathlessness sensation in both experimental and clinical studies.^[3,4] In this regard, recent cross-sectional studies provided evidence that VAS assessment of breathlessness perception could be a useful tool to measure asthma symptom severity,^[5] asthma control,^[6] and bronchodilation test response^[7] in clinical practice.

Therefore, we tested the hypothesis that VAS could be able also to assess the SABA use in a world-life setting. For this purpose, 102 (46 males, mean age: 29.2 years) patients with intermittent asthma were consecutively considered. Asthma diagnosis was performed according to validated criteria stated by the GINA document.^[1] All patients were treated only by SABA, used as symptomatic reliever for dyspnea. Patients monthly recorded the number of SABA puffs that took within 6 months. Subsequently, they were visited and their perception of SABA use was evaluated by VAS (0 = no puff; 10 = a lot). Pearson correlation coefficient was used to evaluate possible correlation between VAS for medication use perception and the number of puffs taken. VAS for medication use perception strongly correlated with the number of puffs taken ($r = 0.899$, $P < 0.0001$), as shown in Figure 1.

A possible limitation of the present study might be the relative awareness of patients as they kept the diary. The main outcome is the possibility of using VAS for estimating the patient's perception of SABA use in clinical practice. This information may be very useful in the management of asthmatic patients as SABA symptomatic use reflects quite well the grade of asthma control.^[8] Actually, the frequent use of SABA is associated with poorly controlled asthma. Thus, VAS measurement could be an easy and quick tool for assessing SABA medication use in real-world setting. Consequently, the awareness of symptomatic medication use could improve the belief of illness and potentially improve patient's self-management behavior.

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Conflicts of interest

There are no conflicts of interest.

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