VAS for assessing the perception of antihistamines use in allergic rhinitis

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Summary. The quantification of the antihistamines' consumption is particularly relevant in clinical practice, since their remarkable use is usually associated with severe symptoms. The aim of the study was to measure the visual analogue scale (VAS) for assessing the patient's perception about antihistamines use in patients with allergic rhinitis. 103 patients (49 males, mean age 35.9 years) with allergic rhinitis due to Parietaria pollen were evaluated retrospectively. They recorded monthly the number of antihistamine tables they took during the pollen season (lasting for about 5 months). There was a strong relationship (r= 0.921 Pearson; p<0.0001) between the number of tablets and the VAS score. The assessment of the perception of the antihistamines use by VAS could be an easy and quick tool in the management of patients with allergic rhinitis in clinical practice. (www.actabiomedica.it)

Key words: allergic rhinitis, antihistamines, visual analogue scale, medication use, perception

Introduction

Antihistamines are commonly prescribed in the management of allergic disorders as first-line choice for allergic rhinitis and urticaria. They are widely used as histamine is the main mediator of allergic reaction and quickly relieve allergic symptoms. Thus, antihistamines are a first-line choice for allergic rhinitis and urticaria (1,2).

The quantification of their consumption may be particularly relevant in clinical practice, since their remarkable use is usually associated with severe symptoms (3). In addition, symptomatic use of antihistamines is a useful parameter for evaluating allergen immunotherapy effectiveness (4,5).

The antihistamines use is commonly evaluated asking directly to the patient the amount, but it can be bothersome and the patients often forget the actual quantity of the tablets taken. Therefore, a diary may be supplied for recording the number of tablets, but patients may be negligent frequently.

Visual analogue scale (VAS) is a psychometric test widely used to measure the patient's perception of symptom severity, emotions, pain, etc. Currently, VAS is a reliable and valid tool to assess allergic control (6). Recently, it has been reported that VAS is a fruitful measure also on smartphone screens at the population level (7). Moreover, combined symptoms severity and medication use assessment by VAS was considered for evaluating AIT response (8). Therefore, VAS may be considered a routine and validated parameter to assess allergic symptom severity in clinical practice (9).

Recently, it has been reported that VAS is a fruitful measure also on smartphone screens at the population level (7). Moreover, combined symptoms severity and medication use assessment by VAS was considered for evaluating AIT response (8). Therefore, VAS may be considered a routine and validated parameter to assess allergic symptom severity in clinical practice (9,10).

That's why we tested the hypothesis that VAS could be a good tool to measure also patient's perception about medication use, specifically concerning anti-

histamines, in clinical practice. The advantage might be the simplicity and mainly the evaluation of the patient's point of view considering her/his own perception of antihistamines taken. Therefore, the aim of the study was to measure the visual analogue scale (VAS) for assessing the patient's perception about antihistamines use in patients with allergic rhinitis (AR).

Materials and Methods

Globally, 103 patients (49 males, mean age 35.9 years) with allergic rhinitis due to Parietaria pollen were evaluated retrospectively.

Allergic rhinitis was diagnosed according to validated criteria, such as on the consistency between history and sensitization (1). In other words, the exposure to the sensitizing allergen should induce the symptom occurrence.

We gave them a diary where they recorded monthly the number of antihistamine tables they took during the pollen season (lasting for about 5 months). Subsequently, they were visited and their perception of antihistaminic use was evaluated by a VAS.

The VAS consisted of one 10-cm ruler asking for antihistamines use perception. In this study, the VAS was a horizontal 10-cm line on which 10 implied the highest medications use, while 0 corresponded to no medications use.

Initially, patients were instructed to a mark on the line indicating their perception at that moment. Thus, the lower was the numerical score marked by the patient, the lower was the perceived medications use. With a movable marker, the subject could mark any point on the 10-cm segment which best described his/her perception. No interval marker was visible on the line.

In addition, patients were asked to withhold the packs of the antihistamines used. Later, the patients were interviewed to verify the consistency between what had been reported in the diary and the real medication consumption.

All patients gave an informed written consent. The internal Review Board approved the procedure.

The relationship between tablets number and VAS was calculated by the Pearson test. We labelled the
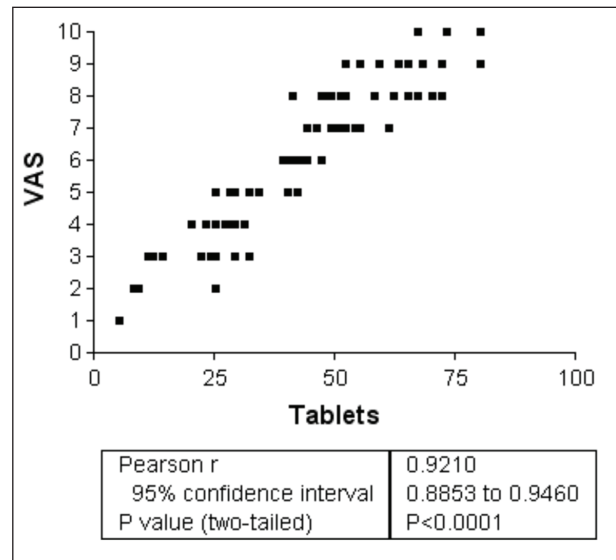

Figure 1. Relationship between number of taken tablets and VAS score assessing the perception of their use

strength of the association as follows: for absolute values of r, 0 to 0.19 is regarded as very weak, 0.2 to 0.39 as weak, 0.40 to 0.59 as moderate, 0.6 to 0.79 as strong and 0.8 to 1 as very strong correlation (11).

Statistica software 9.0 (StatSoft Corp., Tulsa, OK, USA) was used for all the analyses.

Results

All patients were re-visited and reported the diary and performed VAS.

There was a strong relationship (r= 0.921 Pearson; p<0.0001) between the number of tablets and the VAS score (Figure 1).

In addition, the comparison between diary recorded data and the number of tablets used was very high (>95%).

Discussion

The main outcome is the possibility of using VAS to estimate the patient's perception of antihistamines use in clinical practice. Indeed, the patients' perception measured by VAS correlated well with the quantity of antihistamines taken recorded in the diary. Actu-

ally, the results are not surprising, as good correlation should be expected between two self-reported tools in the same patient. Furthermore, the VAS was completed after the medication diary was kept for 5 months. The act of documenting medication use will likely raise self-awareness of medication use and may help in recall of use when completing the VAS. Thus, the two tools are not independent of each other. Also, the VAS medication use likely closely mirrors allergic rhinitis symptom scores. However, the assessment of the patient perception of medication use should be always associated with the symptom scoring to correctly tailor management strategies. The symptom scoring could be measured by the traditional 4-point scale (such as 0= absent, 1=mild, 2= moderate, 3= severe) or even by VAS itself (4). In this regard, a combined VAS (i.e. to measure the patient perception of both symptom severity and medication use) has been proposed recently to evaluate the response to allergen immunotherapy (5).

The clinical relevance of the present study also concerns the widespread use of antihistamines as they exert an antagonism of histaminic activities and an anti-allergic activity (12-15).

This study has some possible limitations: the open design and the relative awareness of patients as they kept the diary. However, it was conducted in a real-world setting, therefore the findings may be translated to the clinical practice.

In addition, it has to be noted that antihistamines exert a mere symptomatic effect, as when they are suspended, allergic inflammation and symptoms restart. Moreover, as allergic inflammation is frequently a chronic condition, it may be useful to combine antihistamine treatment with non-pharmacological strategy, including thermal water and food supplements. In this regard, it has been recently reported that thermal water associated with hyaluronic acid and grapefruit seed extract significantly improved respiratory symptoms (16).

In conclusion, antihistamine use may be assessed also by the measurement of patient perception by VAS in clinical practice.

Conflict of interest: Each author declares that he or she has no commercial associations (e.g. consultancies, stock ownership, equity interest, patent/licensing arrangement etc.) that might pose a conflict of interest in connection with the submitted article

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