

## Verbalizing Extremes of the Visual Analogue Scale for Pruritus: A Consensus Statement

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Itch (pruritus) is an unpleasant sensation that leads to the desire to scratch (1). Pruritus may compromise quality of life and sleep in affected individuals. Pruritus is similar to pain, in being a subjective symptom; assessment of its intensity is a key issue in evaluating severity and therapeutic outcome of patients with pruritic disorders of diverse origins (cutaneous, systemic, neuropathic, psychogenic) (2). Various types of rating scales have been used and validated in the study of clinical itch, including the visual analogue scale (VAS), numerical rating scale, verbal rating scale, and behavioural rating scale (2–4). Among these measurement tools, the VAS seems to be one of the most commonly used methods of assessing pruritus severity, as it provides an easy and rapid estimation of itch (3, 4). The VAS is a 10-cm long line, oriented horizontally or vertically, on which patients indicate the intensity of pruritus by marking the line at the point that corresponds to the severity of their pruritus, where the beginning of the scale refers to no pruritus (0 point) and the end of the scale to the most severe pruritus (10 points) (3, 4). On behalf of the International Forum for the Study of Itch (IFSI), we discussed methodological problems of the VAS in clinical settings. During our discussion we identified that it is necessary to clarify the verbal expression of the 10-point end, because it varies from study to study. It includes expressions such as “worst imaginable itch”, “the most severe pruritus they can imagine”, “most intense sensation imaginable”, “maximal itch”, “severe itching” and “unbearable pruritus” (3–8). In this report, we propose to consolidate the verbalization of extremes of VAS for “itch intensity” and “sleep disturbance (nocturnal itch)”.

### CONSENSUS STATEMENT

Members of the Japanese Society for Dermatoallergology and Contact Dermatitis (JSDACD) (MF, TE, AI, ST, YK, KT, TS, and HS) discussed possible core items for evaluating pruritus in clinical settings, including clinical trials, in Japan. Nine items were proposed and we evaluated the importance of each item by assigning

a weight score (maximum points, 10) to each. The 2 highest-ranked items were “itch intensity” (score,  $10 \pm 0$ ) and “sleep disturbance” ( $9.3 \pm 0.8$ ), followed by “maximum score of itch” ( $7.3 \pm 2.6$ ), “itch frequency” ( $6.1 \pm 1.8$ ), “itch duration” ( $6 \pm 2$ ), “number of itch sites” ( $4.3 \pm 2.6$ ), “quality of life” ( $4.3 \pm 2.7$ ), “itch site” ( $3.7 \pm 1.4$ ) and “nature of itch” ( $3.3 \pm 1.5$ ).

We then discussed measurement tools for the two highest rank items, “itch intensity” and “sleep disturbance.” With respect to measuring “sleep disturbance (nocturnal itch intensity),” the discussion group reached an agreement that the VAS seemed to be a suitable scale, similar to the VAS for “itch intensity.” As for the terminology to be used to describe the 10-point end of the VAS, our 8 JSDACD members preferred the expressions “worst itch imaginable” for scoring “itch intensity” and “I cannot sleep at all” for scoring “sleep disturbance (nocturnal itch)”.

These results were presented at the 6<sup>th</sup> World Congress of Itch in Brest, France, 2011. After the Congress, e-mail voting was proposed for the terminology of the 10-point end of the VAS, and this proposal was accepted by the members of the IFSI special interest group (TE, MA, JS, AF, CB, NQP, GY, SS). Twenty-six IFSI members from outside Japan participated in e-mail voting. With regard to the expression of the 10-point end of the VAS for “itch intensity,” “worst imaginable itch” was voted as the most suitable definition, including “worst itch imaginable” ( $n = 14$ ). With regard to the expression of the 10-point end of the VAS for “sleep disturbance”, the expression “I cannot sleep at all” was selected as the suitable definition ( $n = 17$ ) (Fig. 1).

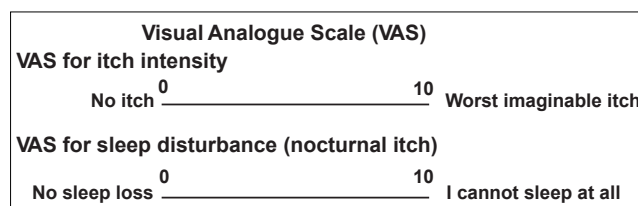


Fig. 1. Visual analogue scale (VAS).

## PERSPECTIVES

Our consensus is in line with the VAS for pain intensity, because recent publications suggest that both “worst imaginable pain” and “worst pain imaginable” seem to be frequently used expressions for the 10-point end of the VAS for pain intensity in various fields of medicine (9, 10). It is also in accordance with the labelled magnitude scale used in sensory psychophysics, where the end-point is “most intense sensation imaginable of any kind” (11). Further work is needed to test the comprehension and meaning of our proposed phrases against other contenders with patients and carers, and whether this varies across cultures and countries, especially when translated into other languages. In order to gain a wider consensus on our proposal, we intend to collaborate with other international groups, such as the Harmonising Outcome Measures for Eczema (HOME) initiative, which seeks to develop a core set of outcome measures for eczema that can be used in future clinical trials and record-keeping (12). Other topics to be further explored are: (i) Whether the VAS for “itch intensity” represents the mean itch intensity of only day-time, or both day- and night-time? (ii) Whether daily VAS assessments are more suitable than weekly ones? (iii) Should the subject be allowed to see his/her previous VAS score before deciding his/her current itch intensity? Based on the pain assessment study, Scott & Huskisson (13) recommended that prior scores should be made available to patients when serial measurements of pain are made in long-term experiments. Due to the presence of diverse clinical settings and trials, these items may be modified and adjusted appropriately by investigators.

*The authors declare no conflicts of interest.*

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