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Accuracy and Reliability of Subjective Answer about Age of Onset in Psoriasis

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Dear Editor:

Psoriasis is a chronic inflammatory disease that can occur at any age, from birth to advanced age. There are many different approaches for classifying psoriasis, such as the classification based on age of onset. As suggested by Henseler and Christophers[1], psoriasis can be subdivided into early-onset and late-onset psoriasis, and this classification has been most widely used. The age that divides early-onset and late-onset psoriasis has been an ongoing controversy. Usually, late-onset psoriasis is considered to begin at 40 years old. However, Kim et al.[2] suggested dividing psoriasis into subgroups of less than and more than 30 years old because of the significant difference found in human leucocyte antigen-Cw*0602, a genetic marker of psoriasis, between the two groups. In most cases, clinicians depend entirely on the subjective memories of patients to obtain source information about the age of onset. However, there are often individual differences in memory capacities, and the patient's memory of the onset age may not correspond with the real onset age. An inaccurate memory may affect the diagnosis of early-onset and late-onset psoriasis, and it may cause negative results of treatments, improper education, and wrong prognosis[3-5]. Accordingly, we cast doubt on the reliability of patients' subjective answer about their age of onset acquired during history taking. Therefore, in the present study, we conducted a survey of patients who visited two different hospitals for the treatment of psoriasis at different time points. During their visits, they completed identical questionnaires during their first visit at each institution. We investigated the accuracy and reliability of patients' memory about their age of onset based on the information collected by the survey.

We administered the survey to 116 new patients who visited the National Medical Center psoriasis clinic from August 2012 to March 2013. All patients had experience with completing the survey, because they had completed an identical questionnaire when they visited Seoul National University psoriasis clinic (Fig. 1A). Assuming that patients' memory about their onset age declines as time elapses, we divided 116 patients into subgroups according to the periods between completion of the first survey and the second one[6,7]. The subgroups were as follows: (i) less than 5 years, (ii) 5～9 years, (iii) 10～19 years, and (iv) more than 20 years. On the basis of these subgroups, we calculated the accordance rate (accordance rate＝the number of patients who reported the identical onset age in both surveys/the total number of patients). Additionally, the degree of discrepancy was estimated in patients who gave different answers in both surveys. Discrepancy was defined as the difference in onset age between the first and second surveys. Then the average value in each group was calculated. Overall, 71% of patients provided the same onset age in both surveys, meaning that they could remember exactly when psoriasis developed even after much time had passed. Interestingly, accordance rates according to the periods between completion of the two questionnaires were as follows: less than 5 years, 77.7%; 5～9 years, 82.1%; 10～19 years, 63.6%; and more than 20 years, 60.7%; $p<0.001$ (Table 1). Considering that late-onset psoriasis begins at more than 40 years old, these results showed a negative correla-

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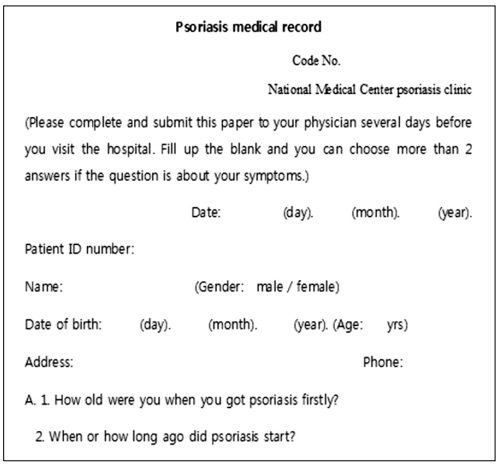
A



Psoriasis medical record

Code No.

National Medical Center psoriasis clinic

(Please complete and submit this paper to your physician several days before you visit the hospital. Fill up the blank and you can choose more than 2 answers if the question is about your symptoms.)

Date: (day). (month). (year).

Patient ID number:

Name: (Gender: male / female)

Date of birth: (day). (month). (year). (Age: yrs)

Address: Phone:

A. 1. How old were you when you got psoriasis firstly?

2. When or how long ago did psoriasis start?

B

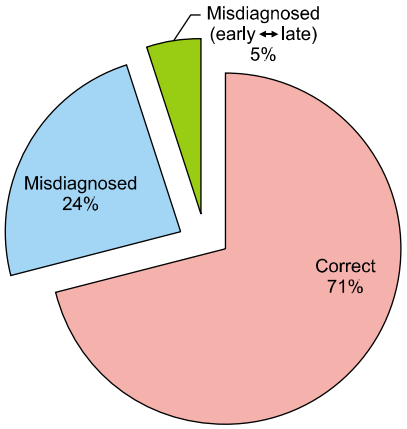


Fig. 1. (A) All patients completed identical questionnaires about their age of onset. (B) Pie graph showing that 71% of patients knew the accurate age of onset, whereas 29% of the responses were different compared to the previous survey responses. Additionally, 5% of patients had a diagnosis changed from early-onset to late-onset psoriasis or from late-onset to early-onset psoriasis.

Table 1. Accordance rate between two survey (n=116)

Period between two survey (yr)	Accordance rate (%)
<5	77.7
5~9	82.1
10~19	63.6
≥20	60.7

$p<0.001$.

tion in that the accordance rate of onset age decreased as the interval between the two surveys increased. As a result of patients' incorrect memories, two diagnoses of early-onset and late-onset psoriasis were reversed in 6 of 116 patients (Fig. 1B). These cases were very noticeable, because clinicians started incorrect treatment plans or conveyed incorrect information about the prognosis or information of the disease. We cast doubt on patients' subjective memory about their onset age of psoriasis from history taking when they initially visit the clinics. However, no previous study results about this issue have been reported in the literature until now.

To determine the accurate age of onset, patients should visit the hospital as soon as possible after psoriasis develops. Patients are diagnosed as having either early-onset or late-onset psoriasis according to age of onset of the disease, and this is a significant issue directly related to treatment, determination of prognosis, and patient education. Therefore, it is essential to make efforts to acquire accurate information about the age of onset of psoriasis from patients or their family members. For these reasons, we suggest that clinicians explain how clinically important age of onset is to the patient and that they rigorously check this information. Moreover, dermatologists should acquire valuable information that can be directly helpful for clinical practice, including patients' family history, phenotype pattern, and treatment history. As psoriasis is a chronic disease and it requires long-term treatment plans, dermatologists should clearly record necessary disease information before starting treatment.

A limitation of this study was that we did not control for several various factors such as patients' motivation to answer the questionnaire, severity of disease, or other issues that can influence patients' memory. These uncontrolled variable factors may have affected the outcome of this study.

CONFLICTS OF INTEREST

The authors have nothing to disclose.

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Congenital Linear Smooth Muscle Hamartoma with Hypertrichosis: Hair Density on Dermoscopy in Parallel with the Number of Smooth Muscle Bundles

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Dear Editor:

Smooth muscle hamartoma (SMH) is a rare benign tumor of the skin, characterized by the proliferation of smooth muscle bundles within the reticular dermis[1,2].

A 5-month-old girl presented with multiple skin-colored patches with hypertrichosis on the left upper back since birth (Fig. 1A). The lesions were composed of three patches with linear distribution (Fig. 1B). The mother of the infant had noted transient induration with piloerection of the lesions when exposed to cool air and rubbing, called a "pseudo-Darier sign." Dermoscopic findings showed different types of hypertrichosis in the three patches (Fig. 1D～F). Histopathological examination revealed numerous haphazardly arranged smooth muscle bundles in the dermis (Fig. 1C), and immunohistochemical staining showed diffusely stained smooth muscle actin (Fig. 1G～I). These findings suggested a diagnosis of congenital SMH.

Gagné and Su[3] suggested that hypertrichosis or prominent overlying hair in congenital SMH was usually present, but hair density was unchanged besides increased hair diameter and length. However, we speculated that there is a relation between hypertrichosis including hair density and the amount of smooth muscle bundle. Interestingly, dermoscopy revealed hypertrichosis with varying densities at the different sites (Fig. 1D～F), and histopathological examination revealed different numbers of smooth muscle in the reticular dermis (Fig. 1G～I). Thus, we measured the density of the hair (/mm^3) in each lesion by using dermoscopy and the area of smooth muscle in the reticular dermis (%) by using a digital image analysis software (ImageJ 1.01 version; National Institutes of Health, Bethesda, MD, USA). The density of hair was 0.27/mm^3 in the lateral hairy patch (Fig. 1D), 0.44/mm^3 in the middle patch (Fig. 1E), and 1.40/mm^3 in the medial patch (Fig. 1F), and the number of smooth muscle bundles in the reticular dermis was 9.5%, 24.6%, and 31.0% in each patch (Fig. 1G～I). Therefore, we believed that the number of hair in multiple patches, as observed using dermoscopy, was in proportion with the number of smooth muscle bundles in each lesion, as observed in the histopathological examination

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