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LETTER TO THE EDITOR

The transition from mild to moderate-to-severe chronic plaque psoriasis

Dear Editor,

The clinical course of psoriasis is unpredictable, and the proportion of patients with mild psoriasis at onset who progress to moderate-to-severe disease is unclear.[1] The objective of this study was to investigate the transition from mild to moderate-to-severe psoriasis and to identify risk factors. We conducted a retrospective, observational cohort study involving adult patients consecutively visited at the Hospitals of Verona and Padua between January 2005 and 2020. The inclusion criteria were having a diagnosis of new onset (defined as <6 months duration from the appearance of the first plaques) and mild (candidate to topical therapy)[2] plaque psoriasis and receiving at least three follow up visits at 4–6 month intervals. The criteria for considering the transition from mild to moderate-to-severe was becoming candidate to systemic therapy including phototherapy and/or one of the following: PASI and/or BSA > 10; disease involving sensitive areas; failure to topical therapy. The proportion and the incidence rate of patients who transitioned to moderate-to-severe using an event per person-year analysis were estimated. Cox proportional hazards models involving time dependent explanatory variables were fitted to estimate the hazard risk (HR) of transition. Three-hundred and eighty-five out of 2596 patients were included as they met the inclusion criteria. Three patients died for myocardial infarction, one for lung malignancy and twenty-six were lost at the follow-up. Over the period of 3409 person-year, corresponding to a median of 8.5 years per person, 97 out of 385 patients (25%) transitioned to moderate-to-severe psoriasis corresponding to an incidence rate (IR) of 2.9% (95% CI 2.3–3.5) per year, while 287 (75%) were stable mild. The baseline descriptive characteristics of the patients are reported in Table 1. The univariable Cox regression analyses showed that male gender and age of psoriasis onset <40 years were significantly associated with a higher risk of transition [HR 1.65 (95% CI 1.07–2.53)], [HR 1.74 (95% CI 1.17–2.62)], respectively. Age of psoriasis onset <40 years was still associated with transition [HR 2.36 (95% CI 1.20–4.65)] after adjustment for gender, BMI and family history for psoriasis. The incident rate ratio (IRR) of transition in early (<40 years) versus late onset (≥40 years) was 1.51 [95%CI (1.08–2.29)] (Figure 1). A total of 37 (9.8%) patients developed PsA,

TABLE 1 Baseline descriptive characteristics of the patients with stable mild psoriasis versus those who transitioned to moderate-to-severe disease.

	Stable mild psoriasis (*N* = 287)	Transition to moderate-to-severe (*N* = 97)	*p*[a]
Age of psoriasis onset, years	39.0 ± 18.5	29.3 ± 13.7	<0.001
Gender, male	159 (55)	67 (69)	0.018
Body mass index, kg/m^2	24.3 ± 2.6	24.2 ± 2.8	0.748
Psoriatic arthritis	4 (1)	5 (5)	0.040
Family history	63 (28)	23 (33)	0.474
Scalp	105 (37)	37 (38)	0.783
Folds	44 (15)	16 (17)	0.785
Nails	28 (10)	6 (6)	0.285
Palmoplantar	31 (11)	7 (7)	0.307
PASI	4.1 ± 2.9	4.5 ± 3.6	0.262
DLQI	3.1 ± 2.6	3.5 ± 3.8	0.249
Obesity	61 (21)	27 (28)	0.182
Type 2 diabetes	12 (4)	7 (7)	0.233
Hypertension	48 (17)	17 (18)	0.856

Note: Continuous and categorical variables are presented as means ± standard deviation (SD) and proportions, respectively.

Abbreviations: DLQI, dermatology life quality index; PASI, psoriasis area and severity index; PsA, psoriatic arthritis.

[a]Pearson's chi-square test for categorical variables and the T test for normally distributed continuous variables.

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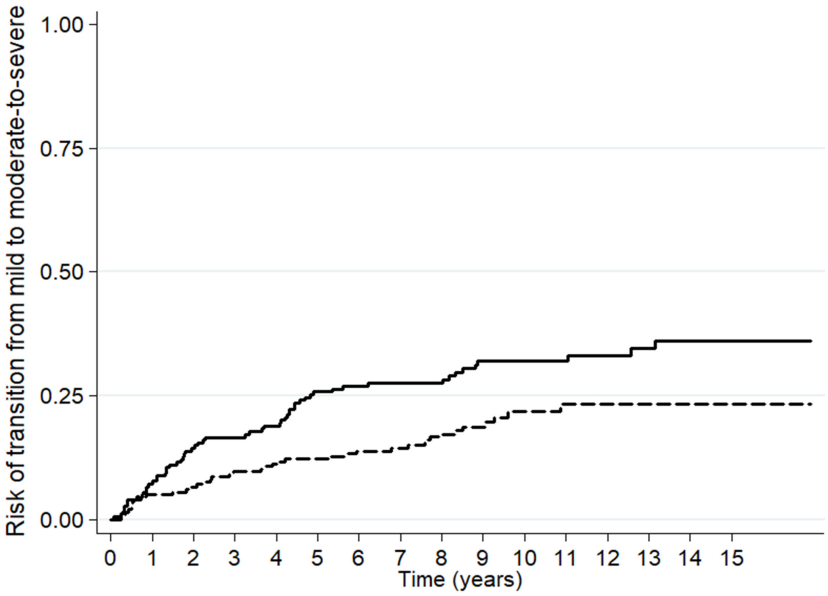

FIGURE 1 The cumulative incidence curves of transition in the study population stratified by age of psoriasis onset; patients with early onset (<40 years)—dashed line—versus those with late onset (≥40 years); $p = 0.047$ by log-rank test as assessed by the Kaplan–Meier survival method.

including 22 (7.2%) with mild and 15 (14.0%) who transitioned to moderate-to-severe psoriasis ($p = 0.034$).

Yet in 1985, Henseler and Christophers distinguished early age onset (<40 years, Type 1) and late age onset psoriasis (≥40 years, Type 2).[3] The former was noticed to be unstable and displaying frequent relapses and progression in severity compared to the latter.[4] Ferrandiz et al. noted that patients with early onset psoriasis (age < 30 years) had a more severe course.[5] Earlier onset was associated with more extensive involvement also in Korean patients.[6] Consistent with our results was also the study from Svedbom et al., who found that the cumulative incidence of progression to severe psoriasis at 12 years from enrollment was 21%.[7] Patients with early onset had a higher prevalence of HLA-Cw6 and positive family history compared to those with late onset, but no difference in the course of the disease.[8] Identifying those patients at greater risk of developing severe psoriasis is of great interest since they may need close follow-up.[1] There is accumulating evidence supporting that early intervention with targeted pharmacotherapies may beneficially affect the clinical course of psoriasis and prevent the onset of PsA.[1,9,10] In conclusion, our findings suggest that most of the patients with mild psoriasis at the onset remain stable and early disease onset is associated with higher risk of transition in severity.

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CONFLICT OF INTEREST STATEMENT

The authors have no conflict of interest to declare.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

ETHICS STATEMENT

The present study was conducted in accordance with the Declaration of Helsinki, initially published in 1964, on Ethical Principles for Medical Research Involving Human Subjects.

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