

UNIQUE PSORIATIC LESION VERSUS MULTIPLE LESIONSAnca Chiriac,^{1,2} Piotr Brzezinski³, Liliana Foia⁴, Anca E Chiriac⁴, Tudor Pinteala⁴, Caius Solovan⁵¹Apollonia University Iasi, Dermato-Physiology Department, Strada Muzicii nr 2, Iasi-700399, Romania²Nicolina Medical Center, Department of Dermatology, Iasi, Romania³Department of Dermatology, 6th Military Support Unit, os. Ledowo 1N, 76-270 Ustka, Poland⁴University of Medicine and Pharmacy „Gr. T Popa” Iasi, Romania⁵University of Medicine and Pharmacy „V Babes” Department of Dermatology, Timisoara, Romania**Source of Support:**

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Corresponding author: Prof. Anca Chiriacanca.chiriac@yahoo.com

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Abstract**Aim:** To evaluate the number of lesions of psoriasis and to find risk factors for multiple lesions.**Material and Methods:** 1,236 patients (male 54.13%, female 45.87%) with psoriasis were seen over a period of 8 years in an Outpatient Clinic. Patients filled out questionnaires containing age at onset, number of lesions and location at the beginning of the disease, gender, type and localization of psoriasis at the time of clinical examination, psoriasis family history, previous treatment, comorbidities, and social status.**Results:** The number of psoriasis lesions correlates with: onset age of psoriasis ($F=8.902$, $p=0.0029$); age at the moment of clinical examination ($F=8.902$, $p=0.0029$); residence in rural area ($\chi^2=8.589$, $p=0.00338$, 95%CI); alcohol intake ($\chi^2=16.47$, $p=0.00005$, 95%CI); smoking ($\chi^2=8.408$, $p=0.00373$, 95%CI); occupation: workers/pupils/students ($\chi^2=14.11$, $p=0.0069$, 95%CI).**Conclusions:** There is a correlation between number of psoriatic lesions and some factors. Multiple lesions were observed in older patients, smokers and drinkers, coming from rural area and social active (workers and pupils/students). No correlation was statistically proved between number of lesions and gender, comorbidities and family history of psoriasis.**Key words:** psoriasis; number of lesions; Romania; statistical analysis; statistical correlation; large clinic-based sample**Cite this article:**Chiriac A, Brzezinski P, Foia F, Chiriac AE, Pinteala T, Solovan C. Unique psoriatic lesion versus multiple lesions. *Our Dermatol Online*. 2014; 5(4): 370-373.**Aim**

The aim of the work was to evaluate the number of lesions of psoriasis and to find risk factors for multiple lesions.

Material and Methods

At the end of 2011, we initiated a project which intended to evaluate the number of lesions of psoriasis at the moment of clinical examination and to find correlations between clinical characteristics of lesions and other factors: onset age, present

age, gender, residence, smoking, alcohol intake, severity index, comorbidities, work status, family history of psoriasis.

1,236 patients (male 54.13%, female 45.87%) with psoriasis were seen over a period of 8 years in an Outpatient Clinic in Romania, by the same dermatologist, the diagnosis was certified by clinical features and, when necessary, by skin biopsies. The subjects were also asked about other medical problems, the presence of similar lesions among other members of the family.

Results

The distribution of psoriasis was clearly recorded. Active lesions were noted on the scalp, face, trunk, anogenital area, arms, legs, hands, feet or nails, i.e. in 10 different locations (Tabl. I).

The most common finding was psoriasis on the arms and legs, followed by scalp psoriasis. Less common locations were the trunk and palmo-plantarregion. The facial area was affected in

	Nr of cases	%
Nail psoriasis	165	13.35%
Psoriatic arthritis	309	25.00%
Koebner	173	14.00%
Scalp psoriasis	681	55.10%
Gutate psoriasis	146	11.81%
Superior limbs	788	63.75%
Inferior limbs	736	59.55%
Trunk	462	37.38%
Face	55	4.45%
Palmo-plantar	205	16.59%
Others	265	21.44%
Total	1236	

Table I. Clinical aspect of psoriasis.

A few patients (1.21%) with multiple onset lesions turned to have later unique lesions; 7.61% of them preserved the initial multiple lesions (Tabl. III).

A small percentage (15.94%) of onset single lesion patients in time remained with unique (the same or different) cutaneous psoriasis stigma.

Vast majority of cases (75.24%) with declared unique psoriatic lesion at the onset of the disease developed multiple skin manifestations over short or long period of time.

Statistical report shows no marked relationship between locations of the lesions at the first diagnosis of psoriasis and at the moment of onset evaluation. ($r=0.1406$, $\chi^2=1.018$, $p=0.312$, 95%CI).

Evaluation of risk factors associated with multiple psoriatic lesions was done and the results are summarized in Table IV.

4.45% of all the examined persons.

Majority of patients (82.85%) had multiple skin lesions at the moment of clinical inspection.

Of 1236 patients enrolled in the study an approximately equal distribution was observed among patients with solitary lesion or 2, 3 or 4 body areas involved (Tabl. II).

More generalized forms were very rare.

Location	Nr. cases	%
Unique lesions	212	17.15%
Multiple lesions	1024	82.85%
2 body areas	266	21.55%
3 body areas	244	19.74%
4 body areas	240	19.41%
5 body areas	155	12.54%
6 body areas	76	6.15%
7 body areas	30	2.43%
8 body areas	12	0.97%
10 body areas	1	0.08%
Total	1236	

Table II. Evaluating the number of psoriatic lesions at the moment of clinical examination.

Table V presented PASI vs number of lesions.

1. Onset age vs number of lesions

Median onset age of psoriasis does not show significant differences related to location of the psoriatic lesions: unique vs multiple. ($F=12.93$, $p=0.000337$, 95%CI)

2. Age at the moment of clinical examination vs. number of lesions

The median age of patients with multiple lesions (45.55 years \pm 15.72 SD) was significant higher ($F=8.902$, $p=0.0029$) than the same parameter calculated for patients with unique lesion (41.99 years \pm 15.72 SD).

Onset location	Location at the moment of examination		%
	unique location	multiple location	
unique location -onset	197 / 15.94%	930 / 75.24%	1127
multiple location -onset	15 / 1.21%	94 / 7.61%	109
Total	212	1024	1236

Table III. Comparison between unique onset lesion and multiple lesions at the moment of clinical examination.

3. Residence vs. number of lesions

The risk for multiple lesions is 2.05 higher in rural area. A moderate association is evidenced between residence and multiple location ($\chi^2=8.589$, $p=0.00338$, 95%CI)

4. Gender vs. number of lesions

There is no association between gender of psoriasis patients and number of the lesions ($\chi^2=3.164$, $p=0.0752$, 95%CI)

5. Psoriasis severity index and number of lesions

It is obvious that a very strong correlation is proved (and attest our study) between the severity of the disease and number of psoriasis lesions ($r=0.414$, $p<<0.01$, 95%CI).

6. The presence of comorbidities vs. number of lesions

There is no correlation between the presence of comorbidities and multiple locations ($\chi^2=2.103$, $p=0.146$, 95%CI). Patients with psoriasis and comorbidities have a very low risk of developing multiple skin lesions. (OR=1.25).

7. Alcohol intake(by declaration) vs. number of lesions

A strong association is confirmed among alcohol intake and multiple location ($\chi^2=16.47$, $p=0.00005$, 95%CI). The risk for disseminated psoriasis lesions in alcohol consumers is 2.06 higher compared to non-drinkers (OR=2.06).

8. Smoking vs number of lesions

Smoking and multiple location are correlated ($\chi^2=8.408$, $p=0.00373$, 95%CI). Risk found in smokers to multiple lesions is 1.71 higher compared to non-smokers. (OR=2.06).

9. Occupation vs number of lesions

Multiple lesions of psoriasis were noted in workers (50.32%) and pupils/students (11.08%) Only 2.18% of people, those with no income had multiple lesions. A strong association links the occupation and location of lesions ($\chi^2=14.11$, $p=0.0069$, 95%CI).

10. Family history of psoriasis vs number of lesions

Statistically there is no correlation between the presence of family history of psoriasis and number of lesions. ($r=0.0017$, $\chi^2=2.06$, $p=0.724$, 95%CI).

	Location	
	unique lesionnr patients / %	multiple lesionnr patients / %
Urban residence	192 / 18.53%	844 / 81.47%
Rural residence	20 / 10.00%	180 / 90.00%
Male gender	103 / 15.40%	566 / 84.60%
Female gender	109 / 19.22%	458 / 84.60%
Mild psoriasis	132 / 24.63%	404 / 75.37%
Moderate psoriasis	65 / 13.00%	435 / 87.00%
Severe psoriasis	15 / 7.50%	185 / 92.50%
Comorbidities absent	135 / 18.44%	597 / 81.56%
Comorbidities present	77 / 15.28%	427 / 84.72%
Alcohol consumer	45 / 10.98%	365 / 89.02%
Non acohol consumer	167 / 20.22%	659 / 79.78%
Nonsmoker	171 / 19.06%	726 / 80.94%
Smoker	41 / 12.09%	298 / 87.91%
Pupil/student	45 / 3.64%	137 / 11.08%
Worker	130 / 10.52%	622 / 50.32%
Retired	20 / 1.62%	129 / 10.44%
Social assisted	1 / 0.08%	27 / 2.18%
Job less	16 / 1,29%	109 / 8.82%
Family history absent	150 / 17.22%	721 / 82.78%
First degree relatives with psoriasis	38 / 19.00%	162 / 81.00%
Second degree relatives with psoriasis	15 / 13.04%	100 / 86.96%
Third degree relatives with psoriasis	7 / 19.44%	29 / 80.56%
Fourth degree relatives with psoriasis	2 / 14.29%	12 / 85.71%

Table IV. Number of lesions vs residence, gender, index severity, presence of comorbidities, alcohol, smoking, work status, family history of psoriasis.

Parameter/factor	PASI index-correlation	Number of psoriatic lesions-correlation
Onset age	yes	no
Age at the moment of clinical examination	yes	yes
Gender (male)	yes	no
Residence in rural area	yes	yes
History family of psoriasis	yes	no
Presence of comorbidities	yes	no
Alcohol and smoking	yes	yes
Work status-education	Retired persons-jobless	Workers/pupils-students

Table V. PASI vs number of lesions.

Discussion

We have used a simple and direct method of recording any active psoriasis lesion in ten different body regions, instead of using the PASI score or DLQI appreciations.

The extent of the skin disease at the moment of present examination showed no correlations with: age at the moment of examination, confirming different other studies that have reported no difference in extent of lesions linked to the age at onset [1,2].

Multiple lesions were described in late psoriasis (over 40 years of age), although reports support the hypothesis that late psoriasis is milder than early psoriasis [3] based on PASI evaluation.

It is well accepted that psoriasis predominates in men and mild to severe forms of the disease have been reported in male patients [4]. Present study does not attest any link between gender of the patients enrolled in the study and number of psoriasis lesions.

Alcohol and smoking are two parameters strongly connected to extent of psoriasis due to different causes: stress activity, limited access to dermatological care, poor hygiene status, associated diseases induced by alcohol and smoking, lack of stable income and deprived nutrition.

Although it is well known that severe forms of psoriasis (PASI 10 or higher) are associated with the presence of co-morbidities, present study does show any correlation between the extent of psoriatic lesions and the occurrence of other systemic diseases [5].

In urban areas it is described a higher prevalence, but with mild forms, of psoriasis, while in rural areas severe and untreated forms are commonly seen. Explanations can be found in reduced address ability of people living in villages to a specialized psoriasis center, late diagnosis and long period of time with no treatment, longer exposure to sun due to open air activities, smoking and alcohol intake, different nutrition habits, diminished skin care hygiene measures. These may also clarify the prevalence of patients with multiple lesions of psoriasis in patients living in rural areas.

Work status and education are two major factors taken into

account when evaluating a patient with psoriasis: severity index correlates with both; multiple lesions of psoriasis were seen in workers and pupils/students while persons with low income and poor living conditions had no extensive diseases.

Family history of psoriasis, although admitted to explain at least partially the severity of the disease in adults, does not have any impact on number of lesions, accordingly to our study.

Conclusion

The number of psoriasis lesions correlates with:

- age at the moment of clinical examination ($F=8.902$, $p=0.0029$);
- residence in rural area ($\chi^2=8.589$, $p=0.00338$, 95%CI);
- alcohol intake ($\chi^2=16.47$, $p=0.00005$, 95%CI);
- smoking ($\chi^2=8.408$, $p=0.00373$, 95%CI);
- occupation:workers/pupils/students ($\chi^2=14.11$, $p=0.0069$, 95%CI).

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