

RESEARCH LETTERS

Allergen-specific IgE responses are found in pre-Sézary syndrome patients and in erythrodermic atopic patients but not in true Sézary syndrome patients

To the Editor: Allergen-specific IgE responses are found in pre-Sézary syndrome patients and in erythrodermic atopic patients but not in true Sézary syndrome (SS) patients.

Recently, Scala et al¹ reported that 43% of SS patients develop specific IgE (sIgE) antibodies to both environmental and food allergens and that this is associated with a lower survival rate. SS can be preceded by a "preleukaemic" form of SS, pre-SS not yet fulfilling all SS criteria but presenting with therapy-resistant erythroderma, elevated total IgE (tIgE), and the presence of CD4-positive cells infiltrating the skin.² Clinically, the differential diagnosis between pre-SS and severe atopic dermatitis (AD)

may be challenging. Significantly elevated IgE levels are often found in AD patients and in pre-SS patients, as well as in SS patients.

Our objective was to compare microarray-defined IgE profiles and staphylococcal antibody responses in erythrodermic atopic eczema, pre-SS, and SS patients.

We retrospectively evaluated 18 erythrodermic patients, of whom 9 had confirmed SS, 4 had pre-SS, and 3 had AD. Two patients had erythrodermic mycosis fungoides. In all patients, T-cell clonality was evaluated from blood and/or tissue samples and to differentiate SS from pre-SS, the absolute numbers of peripheral blood CD4+, CD26– cells were quantitated (Table 1). Total and staphylococcal enterotoxin IgE was determined according to standard protocols in kU/L (ImmunoCAP, Thermo Fisher Scientific, Uppsala, Sweden). Specific IgE reactivities of the sera against a set of 103 to 112 environmental

Table 1. IgE levels and specific IgE reactivities in different patient groups

Patient group	Age (years)/sex	Diagnosis	TCR clone positivity (multiplex TCR method for T-cell receptor rearrangement)	CD4+, CD26– absolute count (× 10E9/L)	Cyclosporine treatment	Range of serum total IgE kU/L (reference value <110 kU/L)	Number of allergen components recognized in IgE microarray ISAC	Number of staphylococcal enterotoxins recognized in IgE ImmunoCAP (>0.35 kU/L)
SS patients								
1	59 M	SS	Blood	2.76	No	162-193	0/112	1/4
2	79 F	SS	Blood	†	No	10-19	0/112	0/4
3*	74 F	SS	Blood	1,2	No	40-2229	0/112	3/4
4	70 F	SS	Blood	4.5	Yes	11-16	0/112	0/4
5	42 M	SS	Blood	3.1	No	98	0/112	0/4
6	64 M	SS	Blood	†	No	491-3709	0/112	1/4
7*	71 M	SS	Blood	†	Yes	609-1012	0/112	2/4
8	84 F	SS	Blood	1.7	No	80	0/112	0/4
9	76 M	SS	Blood	2.5	No	56	0/112	0/4
Other patients								
1	48 F	AD, pre-SS	No	0.2	Yes	2577-11231	12/112	4/4
2	73 F	AD, pre-SS	No	0.5	Yes	11130-45873	20/112	4/4
3	57 F	AD, pre-SS	No	0.14	Yes	15361-40574	41/112	4/4
4	59 M	AD	No	ND	No	11311-107640	18/112	4/4
5	80 F	AD	No	ND	No	19976-106940	38/112	4/4
6	20 M	AD	No	ND	No	72925	70/103	4/4
7	66 M	eMF	No	ND	No	206-87410	12/112	4/4
8	68 M	AD, pre-SS	No	ND	Yes	5163	21/112	4/4
9	57 M	eMF	No	ND	No	78	0/112	0/4

AD, Atopic dermatitis; eMF, erythrodermic mycosis fungoides; F, female; M, male; ND, not done; pre-SS, pre-Sézary syndrome; SS, Sézary syndrome.

*Deceased.

†In this patient the percentage of morphologically identified Sézary cells was >50%.

‡CD4/CD8 ratio available (case 2:5.5; case 7:171).

and food allergen components were evaluated using the ImmunoCAP ISAC microarray chip (Thermo Fisher Scientific, Uppsala, Sweden). The results are reported in ISAC Standardized Units (ISU), ranging from 0.3 to 100 ISU.

None of the 9 patients with SS showed any IgE reactivity in the microarray analysis. Patients with AD or pre-SS had multiple positive reactivities ranging from 12 of 112 (11%) to 70 of 103 (68%) positive allergen components per patient as shown in Table I. The AD and pre-SS patients had sIgE antibodies to both food and environmental allergens. All pre-SS and AD patients had high sIgE reactivities ranging from 0.4 to 49.5 kU/L toward all 4 staphylococcal enterotoxin antigens studied (St a SEA, SEB, SEC, and TSST), while 4 of the 9 SS patients with elevated tIgE showed low reactivity to at least 1 of the staphylococcal antigens in ImmunoCAP (Table I). Interestingly, staphylococcal enterotoxins induce STAT3-mediated pathways, which may drive immune dysregulation favoring the development of SS.³ Underlying genomic STAT3, STAT5a, or STAT5b mutations have been previously excluded in the SS and pre-SS patients included in this study.⁴ In our patients, neither the sIgE levels nor the pattern of IgE reactivity affected patient survival rates, in that only 2 patients with SS have died and their deaths were not due to CTCL-related reasons.

Our results do not support the conclusions of Scala et al,¹ in that we did not detect elevated sIgE levels or broad allergen-reactivity in SS patients nor did our study reveal any associated lowered survival rate.

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The dermatopathology requisition form: Attitudes and practices of dermatologists

To the Editor: The pathology requisition form is an important tool that serves as a primary means of communication between clinicians and pathologists. This is true in the field of dermatopathology in which accurate clinical information can be vital to ensure accurate diagnosis of dermatologic conditions. Data from the Q-Probes voluntary quality improvement program of the College of American Pathologists and other studies demonstrate that pathologists frequently need more information than that provided on the requisition form.¹⁻⁴

We developed a questionnaire to assess dermatologists' attitudes and practices with regard to the dermatopathology requisition form. Variables included participant and practice demographics, attitudes toward clinical information and dermatopathologist bias, and attitudes and actions toward inclusion of specific information on requisition forms. In 2013, the survey was distributed to 145 dermatologists and dermatology residents at the Dermatologic Society of Greater New York, Albany Medical College Annual Dermatology Teaching Day, and The San Francisco Dermatological Society Annual Meeting. Participant demographics are listed in Table I.

Fig 1 (on page 355) shows the number of respondents who believe it is important to include each information variable and the number of respondents who report that they frequently include that variable. Information that was rated as important by many participants included location, size, and clinical differential diagnosis.

When asked if they agree with the statement, "I am reluctant to add clinical information because I do not want to bias the dermatopathologist," 67.6% did not agree, 29.7% somewhat agreed, and 2.8%