Anti RNP in systemic lupus erythematosus

Marina Melek[1], Melissa F. Erdmann[1],Paulo Henrique R. Negreiros[1], Thelma L Skare[1]

ACTA REUMATOL PORT. 2013;38:136-137

To the Editor,

Systemic lupus erythematosus (SLE) is a heterogeneous disease[1]; the analysis of the autoantibodies profile in a SLE patient may help to predict the clinical manifestations[2,3]. Anti-RNP presence have been associated to Raynaud's phenomenon, myositis, esophageal dysmotility and absence of nephritis in studies with a mixed population comprising both SLE and mixed connective tissue disease patients[4,5]. Anti-RNP together with anti-Sm are directed against spliceosome proteins, providing the appearance of an ANA with speckled pattern[6,7]. Spliceosome is an intracellular structure that removes the intronic sequences of the pre-messenger RNA and links protein coding sequences to form mature RNA[6]. Anti-RNP presence is higher in blacks and Asians[8,9] and it is associated with HLA DR2 and 4[9].The positivity is as high as 62% in black patients of African origin[10].

As the clinical and serological associations of anti-RNP in lupus may vary with the patient's ethnic and geographical distribution, we studied the presence of anti-RNP in a SLE population from Southern Brazil. All included patients fulfilled at least four classification criteria for SLE of the American College of Rheumatolo-

1. Hospital Universitário Evangélico de Curitiba

TABLE I. COMPARISON OF SLE CLINICAL PROFILE IN 295 PATIENTS ACCORDING TO THE PRESENCE OF ANTI-RNP

	Anti-RNP positive	ANTI-RNP negative	p
Photosensitivity	63/81 – 77.77%	164/212 – 77.35%	0.93
Oral ulcers	31/78 – 39.74%	105/208 – 50%	0.12
Raynaud	50/80 – 62.50%	86/208 – 41.34%	0.001
Malar rash	41/78 – 52.56%	102/209 – 48.80%	0.57
Discoid lesions	18/80 – 22.50%	21/211 – 9.95%	0.005
Serositis	13/82 – 15.85%	41/213 – 19.24%	0.49
Glomerulonephritis	36/86 – 43.90%	93/212 – 43.86%	0.99
Leukopenia	35/81 – 43.20%	62/211 – 29.38%	0.02
Lymphopenia	21/80 – 26.25%	28/208 – 13.46%	0.009
Hemolytic anemia	9/81 – 11.11%	15/211 – 7.10%	0.26
Thrombocytopenia	14/81 – 17.28%	46/213 – 21.59%	0.41
Arthritis	59/82 – 71.95%	128/211 – 60.66%	0.07
Myositis	3/81 – 3.70%	10/210 – 4.76%	1.00
Convulsions	7/81 – 8.64%	24/213 – 11.26%	0.51
Psychosis	5/80 – 6.25%	12/213 – 5.63%	0.84
Antiphospholipid syndrome	11/82 – 13.41%	18/212 – 8.49%	0.20
Pulmonary hypertension	4/79 – 5.06%	9/202 – 4.45%	0.76
Anti-Ro	35/81 – 43.20%	66/212 – 31.13%	0.055
Anti-La	18/81 – 22.22%	38/212 – 17.92%	0.40
Anti-Sm	51/81 – 62.96%	20/213 – 9.38%	<0.0001
Anti-dsDNA	35/81 – 43.20%	72/212 – 33.96%	0.14
Anticardiolipin IgG	9/81 – 11.11%	31/213 – 14.55%	0.44
Anticardiolipin IgM	12/81 – 14.81%	34/213 – 16.03%	0.79
Lupus anticoagulant	13/75 – 17.33%	28/197 – 14.21%	0.52

gy[11]. The charts were reviewed for demographic data (sex, age at diagnosis, ethnic background and disease duration), clinical and serological findings. The clinical findings included were in the criteria listed by the American College of Rheumatology for SLE classification (1997) and defined by them[11]. Furthermore, the presence of Raynaud phenomena, myositis, pulmonary hypertension and secondary antiphospholipid syndrome was examined.

Auto antibodies considered for analysis were: anti-Ro/SS-A, anti- La/SS-B, anti-RNP, anti-Sm, aCl IgG, aCl IgM (by ELISA using Orgentec Kits®); anti-dsDNA (by immunofluorescence technique (IFT) using Crithidia luciliae as a substrate). Lupus anticoagulant was examined through a screening test, the dRVVT (dilute Russell viper venom test) and confirmed by RVVT.

The sample had 295 patients with mean age at diagnosis of 37.1± 11.9 years; 17 were men and 278 women and the median disease duration was of 6 years. In this sample 65.9% were of African origin (blacks and mulattos) and 34.1% were Caucasian.

The prevalence of anti-RNP was 89/295 (27.8%). No differences were observed regarding gender in anti--RNP positive and negative patients (p=0.87). The associations with clinical and serological profile are in Table I.

In the present analysis, we found associations of anti--RNP with Raynaud phenomena, leukopenia and lymphocytopenia, rash discoid and anti Sm antibodies.

No association (either positive or negative) could be found with renal disease. Racial and environmental modulations are other possible explanations for the variability found in these associations.

To conclude, we can say that in our population the anti-RNP antibodies should alert the clinician to a more careful surveillance regarding hematologic manifestations, discoid lesions and Raynaud's phenomena.

CORRESPONDENCE TO
Thelma L Skare
Rua João Alencar Guimarães,
796 80310420 Curitiba PR – Brazil
E-mail: tskare@onda.com.br

REFERENCES

1. Lutz CA, James JA. Antibodies to spliceosomal components. In Wallace DJ, Hahn BH (eds) Dubois' Lupus Erythematosus, Lippincott Williams & Wilkins, Philadelphia, 2007, p.500--513.
2. Tahpanhes FJ, Vasquez M, Ramires R, Matheus C, Rodriguez MA, Bianco N. Cluster analysis of antinuclear antibodies in the prognosis of SLE nephropathy: are anti extractable nuclear antibodies protective? Lupus 2000; 9:437-444.
3. To CH Petri M. Is antibody clustering predictive of clinical subsets and damage in systemic lupus erythematosus? Arthritis Rheum 2005;52:4003-4010.
4. Reichlin M, van Veerooij WJ. Autoantibodies to URNP particles; relationship to clinical diagnosis and nephritis. Clin Exp Immunol 1991, 83:286-290.
5. Kattah NH, Kattah MG, Utz PJ. The U1 RNP complex-strutural properties relating to autoimmune pathogenesis in rheumatic diseases. Immunol Rev 2010; 233:126-145.
6. Migliorini P, Baldini C, Rocchi V, Bombardieri S. Anti-Sm and anti-RNP antibodies. Autoimmunity 2005, 38: 47-54.
7. Dellavance A, Gabriel Jr A, B Nuccitelli, Taliberti BH, von Mullen CA, CDA Bichara et al. 3rd Brazilian Consensus for autoantibodies in search of Hep-2 cells (ANA). Recommendations for standardization of the screening test of self antibodies in Hep-2 cells, quality control and clinical associations. Rev Bras Rheumatol 2009; 49:89-109.
8. Ticky M Burgin S, Mohanlal P Bellingan A, George J. Autoantibodies in blck South Africans with systemic lupus erythematosus: spectrum and clinical associations. Clin Rheumatol 1996; 15:261-265
9. Garcia CO, Molina JF, Gutierrez-Urena S, et al. Autoantibody profile in African American Patients with lupus nephritis. Lupus 1996; 5:602-605.
10. Santos MJ, Capela S, Figueira R, et al. Characterization of a Portuguese population with systemic lupus erytematosus. Acta Rheumatol Port 2007;32:153-161.
11. Tutuncu ZN, Kalunian KC. The definition and classification of systemic lupus erythematosus. In Wallace DJ, Hahn BH (eds). Dubois' Lupus erythematosus. 7th Ed, Philadelphia, Lippincott Williams & Wilkins, 2007,p.16-20.