ORIGINAL ARTICLES

Clinical and immunological profile of SLE patients: Experience from a Chennai-based tertiary care centre (revisited)

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Abstract

Aim: To study the clinical and immunological profile of patients with newly detected systemic lupus erythematosus (SLE) presented to a tertiary care centre.

Methods: The study involved patients with newly detected SLE (fulfilling the 1997 revised ACR criteria for SLE), admitted in Madras Medical College and Rajiv Gandhi Government General Hospital Chennai between January 2012 and December 2013.

Results: Hundred patients with SLE were assessed for a period of two years, among them, 59% of the subjects belonged to the 3rd decade of life; 86% of the subjects were females and the remaining were males (M:F ratio 6:1). Fever (81%) was the commonest initial manifestation reported, followed by arthritis (61%), cutaneous (58%), neuropsychiatric (45%), and renal (44%) manifestations. In patients with lupus nephritis, class IV (38.63%) was common, followed by class III (22.72%) and class V (15.9%). ANA was positive in all patients (100%), anti-Smith (Sm) was found in 49% of the subjects, followed by anti-Ro (47%), anti-ds DNA (45%), anti U1 RNP (42%) and reduced complements in 72%.

Conclusion: SLE was more common among young females in their 3rd decade. In our study, patients had more of constitutional symptoms followed by joint and skin manifestations. High disease activity was noted in 84% of the patients. The incidence of neuropsychiatric and cardiovascular manifestations was more compared to other Indian studies.

Keywords: SLE, systemic lupus erythematosus, neuropsychiatry, renal, clinicoepidemiological, immunological

Introduction

SLE is the typical autoimmune disease with varied clinical manifestations involving multiple organs. Inadequate data on clinicoepidemiological manifestations and lack of disease registries from India pose major barrier to further understand patient/disease characteristics and to build a comprehensive knowledge base on SLE. In contrast to the Chennai-based study conducted in 1983, our recent study has indicated an increase in neuropsychiatric manifestations of SLE.[1] In view of these findings, the present study has focused on re-evaluating the clinical and immunological features of patients presenting with SLE to our centre.

Materials and methodology

The cross-sectional study was conducted on 100 newly detected SLE patients admitted in Department of Rheumatology, Madras Medical College & Rajiv Gandhi Government General Hospital, Chennai. The duration of study was from January 2012 to December 2013. The ethical committee approval and informed consent in patients own language were obtained before starting the study.

All the patients who satisfied the 1997 revised ACR classification criteria for SLE were chosen, detailed history was obtained and complete clinical examination

was performed. Patients were subjected to baseline blood investigations, immunological investigations, and relevant radiological investigations. ANA was done by either ELISA or indirect immunofluorescence (IIF) by Hep-2 method, ds DNA, anticardiolipin antibody by ELISA, and complements by nephelometry. ANA profile 3 was done by EUROIMMUN Line Immunoassay (Immunoblot). Patient's generalized disease activity was calculated using SLE Disease Activity Index (SLEDAI). Patients with features of overlap syndrome were excluded from the study.

Results and analysis

The study group had 59% of the patients (48% females and 11% males) in the age group of 21-30 years and 24% (22% females and 2% males) belonging to the age group of 17-20 years. So the maximum number of patients was from 2nd and 3rd decades. Among the subjects, 86% of the patients were females and 14% were males. Around 81% of the subjects had fever and constitutional symptoms followed by arthritis, and cutaneous, neuropsychiatry and renal involvement (Fig. 1). Seizure was the common neuropsychiatric manifestations observed, followed by psychosis, stroke etc. (Table 1). In our study group, class IV lupus nephritis was common, followed by class III and class V (Table 2). ANA was positive in 100%, ds DNA in 45%, and low complements in 73%. Anti-Sm was found

Fig. 1: Clinical features of SLE noted in the study cohort (%)

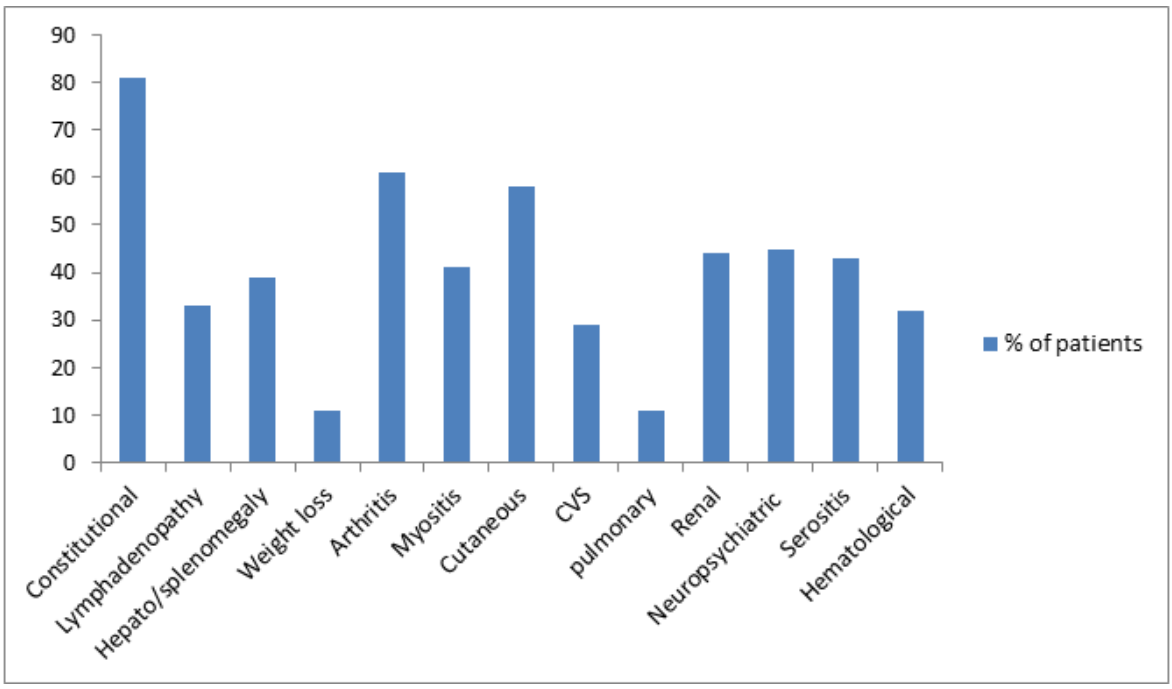

Table 1: Distribution of neuropsychiatric manifestations in the study cohort

Neuropsychiatric manifestations	No. of patients
Seizures	25
Psychosis	19
Stroke	10
Headache	7
Peripheral neuropathy	6
Transverse myelitis	2
Cognitive dysfunction	2
Retinal vasculitis	1

in 49%, followed by anti Ro, anti-dsDNA, and anti-U1RNP (Fig. 2). High disease activity was noted in 84% of the patients.

Out of 100 patients, 25 had flare, of which 16 (64%) had mild/moderate flare and 9 (36%) had severe flare. Among the study participants, 42 had acute cutaneous lesions, 26 had sub-acute cutaneous lesions, and 13 had chronic cutaneous lesions.

Discussion

In the present study, the majority of patients were in their 2nd and 3rd decades with a mean age of 25.45 years. The female to male ratio in our study was 6:1. The corresponding female to male ratios noted in Indian studies by Renu *et al.*, Binoy *et al.*, and Malaviya *et al.* were 11:1, 19:1 and 8:1.[2-4] The average disease duration noted in the present study was 1.63 year, which is comparable to the study done by Saigal *et al.* (2 years) and Malaviya et al. (17 months).[2, 4] The mean age of onset of disease in the current study was 25.45 years and the median age of onset noted in studies by Saigal *et al.* and Binoy *et al.* was 27.9 and 21.6 years respectively.[2,3] Other Indian studies by Malaviya *et al.* and Vaidya *et al.* have reported a median age of onset of 24 and 26 years. So the median age of onset was found to be similar in all the Indian studies.[4, 5] Comparison of the current study with previous study done at the same centre has reported an increased prevalence of neuropsychiatric manifestations, leucopenia, thrombocytopenia, cardiovascular and constitutional symptoms. Comparison

Fig. 2: Prevalence of autoantibodies noted in SLE cohort (%)

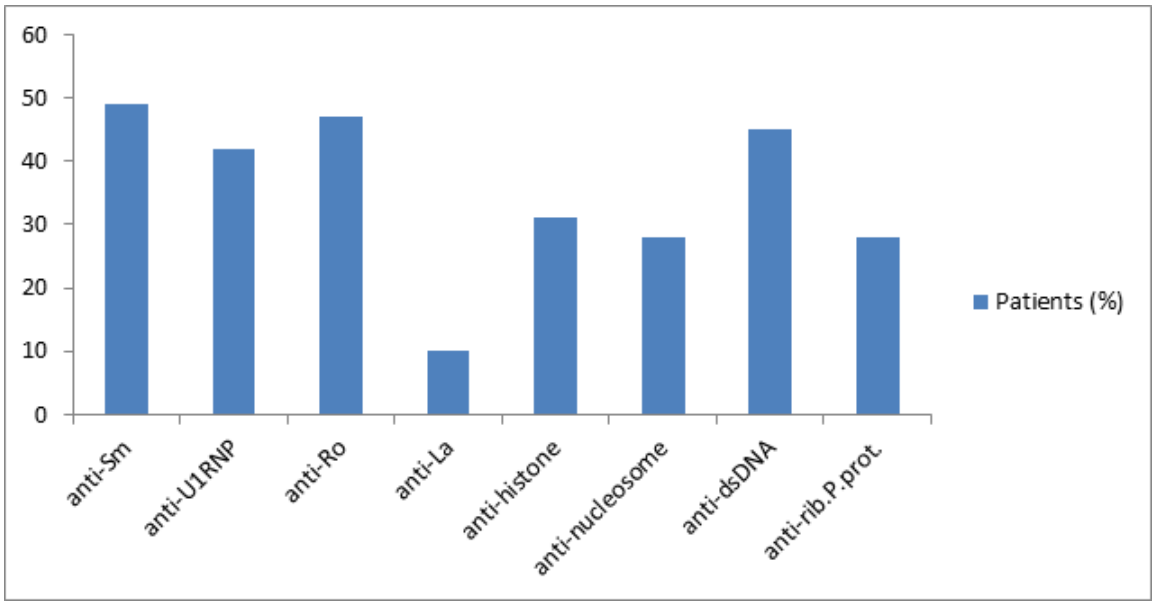

Table 2: Incidence of lupus nephritis in the study group as per the ISN/RPS 2003 classification

Class	No. of patients	%
I	2	4.54
II	3	6.81
III	10	22.72
IV	17	38.63
V	7	15.9
VI	1	2.27
III + V	1	2.27
IV + V	2	4.54
V + VI	1	2.27

Table 3: Comparison of clinical features noted in the present study with other Indian studies

Clinical features	Present study (n=100) 2014, S.India (Chennai) (%)	Malaviya *et al.* (n=101) 1985, N.India (%)[4]	Madhavan *et al.*[1] (n=54) 1983, Madras (%)	Binoy *et al.*[3] (n=75) 2003 S.India, N.Kerala (%)	Vaidya *et al.*[5] (n=220) 1997 W.India (%)	Renu Saigal *et al.*[2] (n=60) 2011 W.India (%)
Fever	81	44	11.1	4.0	NA*	6.7
Lymphadenopathy	33	NA*	NA*	NA*	NA*	NA*
Hepatomegaly/ Splenomegaly	39	NA*	NA*	NA*	NA*	NA*
Weight loss	11	NA*	NA*	NA*	NA*	NA*
Arthritis	61	66	81.4	89.3	70.91	86.7
Myositis	**41**	**NA***	**NA***	**NA***	**NA***	**NA***
Cutaneous	58	85	62.9	64	NA*	NA*
Cardiovascular	29	5	9.2	5.3	11.8	6.7
Pulmonary	11	17	16.6	8	15.5	11.7
Renal	44	73	38.8	33.3	35	56.7
Neuropsychiatry	45	15	20.3	13.3	25.5	13.3
Hemolytic anemia	29	NA*	NA*	0.01	NA*	25
Leukopenia	26	16	3.7	14.7	NA*	43.3
Thrombocytopenia	39	11	7.4	12	NA*	33.3
Serositis	32	NA*	NA*	NA*	NA*	NA*
Raynaud's	7	32	1.8	2.7	15.5	21.
ANA	100%	98%	NA*	93.3%	NA*	98.3%
ds DNA	45%	55%	NA*	76%	NA*	65%
Complements	72%	NA*	NA*	NA*	NA*	NA*

*Not available

of the clinical features reported in the present study with other Indian studies is given in table 3.

Conclusion

The present study has reported higher prevalence of constitutional symptoms, followed by joint and skin manifestations. Around 84% of the patients demonstrated high disease activity. The incidence of renal and neuropsychiatric manifestations was similar, but the rate of incidence of neuropsychiatric and cardiovascular manifestations was more compared to other Indian studies.

Competing interests

The authors declare that they have no competing interests.

Citation

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