

Clinical and laboratory profile of systemic lupus erythematosus patients at a rural tertiary centre in South-South Nigeria: experience from a new rheumatology clinic

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Abstract

Objectives: Systemic lupus erythematosus (SLE) is an autoimmune disorder with a poorly understood aetiology. It predominantly affects females and has a variety of clinical manifestations. In Nigeria, there are limited data on the prevalence and burden of the disease. This study aimed to determine the clinical and laboratory profiles of SLE patients seen in a new rheumatology clinic in South-South Nigeria.

Material and methods: This was a retrospective cross-sectional study conducted over five years (January 2016 to December 2020). The case files of patients that satisfied the diagnosis of SLE were reviewed. The diagnosis was based on the 1997 update of the American College of Rheumatology revised criteria for the classification of SLE. The sociodemographic, clinical, and immunological data were extracted from case records. Data analysis was carried out using IBM SPSS statistics® 2012 version 21.0.

Results: Fifty-two patients were diagnosed with SLE, giving a frequency of 4.7%. Forty-seven (90.4%) of the study participants were females, with a female-to-male ratio of 9.4 : 1. The mean age of the study group was 28.42 years. The mean duration of disease before diagnosis was 4.04 months with a range of 1–15 months. The patients had various organ system manifestations, with polyarthritis being the commonest (86.5%). Others included mucocutaneous (78.8%), haematological (69.2%), serositis (40.4%), renal (38.5%), and neurological (25%) manifestations. Antinuclear antibody (ANA) assay and anti-double-stranded DNA were positive in 100% and 69.2% of patients, respectively. All patients were placed on steroids, and 96.2% had hydroxychloroquine. None of the patients were on biologic disease-modifying antirheumatic drugs.

Conclusions: This study's results are consistent with data from other African countries. To fully understand the burden and epidemiology of SLE in Nigeria, a larger prospective study is needed.

Key words: systemic lupus erythematosus, autoantibody, clinical and laboratory profile.

Introduction

Systemic lupus erythematosus (SLE) is a chronic inflammatory autoimmune disorder with a variety of clinical presentations and a poorly understood aetiology [1]. It is characterized by immunologically induced, clinical, and serological phenomena and follows a relapsing and remitting course. The female-to-male ratio is 9.4 : 1, and

females with a peak age of 20–40 years are more likely to develop SLE [2]. Systemic lupus erythematosus has a complex pathogenesis that includes genetic, immunological, and environmental influences, all of which affect the appearance, progression, and outcome of the disease [3].

There are varying reports on the prevalence and incidence of SLE, with the highest rates of 23.2/100,000

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person-years in North America and the lowest rates of 0.3/100,000 person-years in Africa. The occurrence and clinical presentation of SLE are likely to be influenced by genetic, environmental, sociodemographic, and socio-cultural factors [4].

The disease was initially thought to be rare and less common among Negro Africans, due to immune system disruption caused by multiple parasitic infections [5, 6]. This contrasts with the fact that it is common among African Americans [7, 8]. The seemingly low incidence rate of SLE in Negro Africans can be attributed to low disease detection – especially in primary health care settings, restricted access to testing equipment, underdiagnosis as a result of limited access to health services, and an insufficient number of specialist doctors [9]. However, recent data, as well as experience from several centres in Africa, shows an increasing occurrence of SLE [5, 9]. A major impediment to understanding disease characteristics and establishing a strong SLE knowledge base in Nigeria is the scarcity of epidemiological data and the absence of disease registries.

Systemic lupus erythematosus manifests in a variety of ways, depending on ethnic and racial characteristics. According to data from the United Kingdom, musculoskeletal/cutaneous manifestations affect 85% of patients [10]. In a study conducted in the United States, Afro-American patients were found to have higher rates of nephritis, discoid rashes, anti-ribonucleoprotein (anti-RNP), and anti-Smith (anti-Sm) antibodies. Photosensitivity and oral ulcers, on the other hand, were less common [11]. Arthritis was the most common manifestation, and cardiac disease was the least common in a study done in Western India [12]. In a Zimbabwean study, renal involvement was more common while serositis and photosensitivity were less common than in the United States [13]. Lymphopaenia (48%) was the commonest haematological abnormality [13].

In Nigeria, information is scarce regarding the profile, prevalence, and incidence of SLE. However, Adelowo et al. [14] found the frequency of SLE to be 5.28% of 1250 rheumatic cases seen over 6 years in Southwest Nigeria, with polyarthritis being the most common presentation. This study aimed to determine the clinical and laboratory characteristics of SLE patients in a new rheumatology clinic in South-South Nigeria.

Material and methods

Study design and population

This was a retrospective cross-sectional study conducted over a 5-year period from January 2016 to December 2020. The study was carried out at the Irrua Specialist Teaching Hospital's rheumatology outpatient

clinic. Irrua is the headquarters of the Esan central local government area of Edo State, in South-South Nigeria. The hospital is a tertiary referral centre that serves people in the surrounding towns and states.

The study population were patients who presented with rheumatological complaints at the clinic. The patient's medical records were identified and reviewed, and all the patients' who satisfied the 1997 update of the American College of Rheumatology revised criteria for the classification of SLE were selected for the study [15]. Patients with overlap syndromes were excluded from the study.

Irrua Specialist Teaching Hospital Health Research Ethics Committee ethical approval was obtained before commencement of the study.

Data collection

The medical records of patients who met the inclusion criteria were identified and thoroughly reviewed. The sociodemographic and clinical data, as well as laboratory parameters (complete blood count – CBC, erythrocyte sedimentation rate – ESR, kidney function test, urine analysis, and microscopy), were retrieved from the patients' case notes. The results of immunological assays like antinuclear antibody (ANA) assay, anti-double-stranded DNA (anti-dsDNA), anti-Sm antibody, and other autoantibodies that were available were also retrieved from the files. All data were anonymized before analysis. The antinuclear antibody test was performed using an indirect immunofluorescence assay with HEp-2 cells as a substrate, and the clinically significant titre was $\geq 1 : 80$. Anti-dsDNA and autoantibodies to extractable nuclear antigens (ENA) (anti-Sm, anti-SSA, anti-SSB, anti-RNP) were studied by the enzyme-linked immunosorbent assay method. Values greater than 25 IU/ml and 18 IU/l were considered positive for anti-Sm and anti-dsDNA, respectively. The sera were all tested at the Synlab laboratories in Nigeria.

Statistical analysis

The data were entered and analysed using IBM SPSS statistics® 2012 version 21.0, a commercially available statistical kit for social sciences. Continuous variables were presented as mean and standard deviation, and categorical variables as frequency and percentage.

Results

A total of 52 patients were diagnosed with SLE, accounting for 4.7% of the total number (1100) of rheumatological cases seen during the study period.

Table 1 summarises the sociodemographic characteristics of SLE patients. The mean age was 28.42 ± 10.34

Table I. Sociodemographic characteristics of the study population

Variables	Frequency (%)
Gender	
Male	5 (9.6)
Female	47 (90.4)
Age range [years]	
10–19	10 (19.2)
20–29	19 (36.5)
30–39	15 (28.8)
40–49	5 (9.6)
50–59	3 (5.8)
Mean \pm SD	28.42 \pm 10.34
Marital status	
Single	34 (65.4)
Married	18 (34.6)
Occupation	
Unemployed	8 (15.4)
Civil servant	8 (15.4)
Student	28 (53.8)
Trader/business	8 (15.4)
Religion	
Christian	47 (90.4)
Islam	5 (9.6)
Level of education	
Primary	3 (5.8)
Secondary	22 (42.3)
Tertiary	27 (51.9)
Duration of symptoms [months]	
< 3	22 (42.3)
\geq 3	30 (57.7)
Mean \pm SD	4.04 \pm 3.10
Family history of autoimmune diseases	
Yes	1 (1.9)
No	51 (98.1)

SD – standard deviation.

(range: 12–58) years, with the most affected group being 20–29 years (36.5%), followed by 30–39 years (28.8%). There were 47 females and 5 males, resulting in a female-to-male ratio of 9.4 : 1. The mean duration of illness before diagnosis was 4.04 \pm 3.10 months, and 1.9% had a family history of an autoimmune disease.

Table II shows the clinical manifestations at the time of presentation. Arthritis was the commonest manifestation (86.5%), followed by mucocutaneous manifestations (78.8%), extreme fatigue (73.1%), haematological

Table II. Clinical manifestations of systemic lupus erythematosus noted in the study cohort

Variable	Number (%)
Mucocutaneous	41 (78.8)
Malar rash	13 (25)
Discoid rash	6 (11.5)
Photosensitive rash	25 (48.1)
Bullous rash	9 (17.3)
Alopecia	23 (44.2)
Oral ulcers	22 (42.3)
Musculoskeletal	45 (86.5)
Arthritis	45 (86.5)
Fever	31 (59.6)
Fatigue	38 (73.1)
Renal involvement	20 (38.5)
Serositis	21 (40.4)
Pericarditis	8 (15.4)
Pleuritis	13 (25)
Neurological	13 (25)
Psychosis	9 (17.3)
Headache	11 (21.2)
Seizures	6 (11.5)
Recurrent abortions	6 (11.5)
Haematological	36 (69.2)
Anaemia	34 (65.4)
Haemolytic anaemia	22 (42.3)
Leucopaenia	26 (50)
Lymphopaenia	32 (61.5)
Thrombocytopaenia	18 (34.6)

manifestations (69.2%), and fever (59.6%). Renal and neurological involvement accounted for 38.5% and 25% of the study population, respectively.

The erythrocyte sedimentation rate ranged from 56 to 136 mm/hr with a mean of 105.87 \pm 18.86 mm/hr. The mean packed cell volume (PCV) was 27.92 \pm 4.69% and ranged from 17 to 36%. Thirty-four (65.4%) patients had anaemia (PCV < 30). The mean white blood cell count was 3501/ μ l, with leukopaenia in 26 (50%) patients, lymphopaenia in 32 (61.5%), and thrombocytopaenia in 18 (34.6) patients. In 20 (38.5%) of the patients, urinary abnormalities were present. Low complement was found in 28.8% (15) and 25% (13) for C4 and C3, respectively, in those who were tested. The laboratory features are presented in Table III.

The autoantibody profiles of the subjects are shown in Table IV. The antinuclear antibody was positive in all

Table III. Laboratory features of the study population

Variables	Number tested	Positive result (%)
Anaemia (Haematocrit [%])	52	34 (65.4)
Leucopaenia [μ l] (< 4000)	52	26 (50)
Lymphopaenia [μ l] (< 1000)	52	32 (61.5)
Thrombocytopaenia [μ l] (< 100,000)	52	18 (34.6)
Elevated ESR [mm/1 st hour], Westergren (>20)	52	52 (100)
Positive Coomb's Test	52	22 (42.3)
Elevated serum creatinine [mg/dl] (> 1.4)	52	21 (40.4)
Urine abnormalities	52	
Proteinuria (dipstick > 3+)		20 (38.5)
Urinary casts		15 (28.8)
Low Complement [g/l]		
C3 (< 8)	22	13 (59.1)
C4 (< 0.15)		15 (68.2)

ESR – erythrocyte sedimentation rate.

Table V. Treatment regimen of the study population

Medications	Number of patients (%)
Glucocorticoids	52 (100)
HCQ	50 (96.2)
MMF	17 (32.7)
AZA	17 (32.7)
MTX	3 (5.8)
CYC	14 (26.9)
MMF + HCQ	11 (21.2)
HCQ + AZA + CYC	14 (26.9)
HCQ + AZA	5 (9.6)
MTX + HCQ	1 (1.9)

AZA – azathioprine, CYC – cyclophosphamide, HCQ – hydroxychloroquine, MMF – mycophenolate mofetil, MTX – methotrexate.

patients and ENA was found in 86.5% of the patients. Anti-dsDNA, anti-RNA, and anti-Sm were found in 69.2%, 59.6%, and 48.1% of the study population, respectively. The antinuclear antibody titre ranged from 1 : 160 to > 1 : 5120, with 14 (26.9%) having a titre of 1 : 320. The majority of the tested sera (55.8%) had a speckled pattern, while 42.3% had a homogeneous pattern.

Corticosteroids were given to all patients, either orally as prednisolone, intravenous pulse methylprednisolone, or intraarticular steroids. In 96.2% of the subjects, hydroxychloroquine (HCQ) was prescribed, and no one had any biologic disease-modifying antirheumatic drugs

Table IV. Autoantibody profiles in the study population

Autoantibodies	Number tested	Positive result (%)
ANA	52	52 (100)
Anti-dsDNA	52	36 (69.2)
Anti-Sm	52	25 (48.1)
Anti-Ro	52	19 (36.5)
Anti-La	52	15 (28.4)
Anti-RNP	52	31 (59.6)
ENA	52	45 (86.5)
Antiphospholipid antibody	31	7 (22.6)
LAC		5 (16.1)
ACL		7 (22.6)
Anti- β_2 -glycoprotein		7 (22.6)
ANA Staining pattern	52	
Homogenous		22 (42.3)
Speckled		29 (55.8)
Not specified		1 (1.9)
ANA titre		
Not specified		1 (1.9)
1 : 160		14 (26.9)
1 : 320		4 (7.7)
1 : 640		9 (17.3)
1 : 1280		10 (19.2)
1 : 2560		5 (9.6)
1 : 5120		5 (9.6)
> 1 : 5120		4 (7.7)

ACL – anticardiolipin antibody, ANA – antinuclear antibody, anti-dsDNA – anti-double-stranded DNA, anti-La – anti-lupus anticoagulant, anti-RNP – anti-ribonucleoprotein, anti-Ro – anti-Sjögren's syndrome-related antigen A, anti-Sm – anti-Smith, ENA – extractable nuclear antigen LAC – lupus anticoagulant.

(DMARDs). The patients' immunosuppressive therapy regimens are represented in Table V.

Discussion

Systemic lupus erythematosus is a condition that affects females of reproductive age and has a wide range of clinical manifestations. Despite reports that SLE is rare in Negro Africans [5], several studies have suggested that the burden of SLE is higher than previously thought [9, 14, 16–19].

A total of 1100 patients were seen in the rheumatology clinic during the study period. Fifty-two patients satisfied the diagnosis of SLE, giving a frequency of 4.7%. This frequency is comparable to that reported by Adelowo et al. [14]. The study reveals a 90.4% female predominance, a female-to-male ratio of 9.4 : 1, and an

average age of 28.42 years. This further highlights the young age of presentation and the gender disparity in favour of females, as seen in other African and Indian studies [16, 18, 20]. However, 2 of our patients were above 50 years old. The use of oral contraceptives and postmenopausal hormones has been linked to the onset of SLE, implying that hormonal factors may play a role in its pathogenesis [21]. The average age at diagnosis is slightly lower, but it is similar to other African and Asian studies [16, 22, 23].

The most common manifestation was polyarthritis (86.5%), which is consistent with a previous study by Adelowo et al. (87%) in Southwest Nigeria [14]. Similar findings were observed in Kenya (90%) [16], Uganda (69.9%) [23], Sudan (85.5%) [19], South Africa (90%) [18], Morocco (82%) [24], India (78%) [25], and Tunisia (87.1%) [26]. The cumulative frequencies of clinical and immunological profiles of SLE patients across Africa are represented in Table VI.

Fever was present in more than half of our study population. This is significant because the majority of these patients, particularly in rural areas such as ours, may have been seen in multiple peripheral facilities and most of the time had been treated for malaria and typhoid fever for weeks or months before their presentation. This often leads to a late diagnosis and organ complications.

Photosensitivity (48.1%) was the commonest mucocutaneous manifestation in our series. Genga et al. [16] and Saigal et al. [12] reported comparable frequencies of 44% and 45%, respectively, of photosensitivity. The findings from studies by Adelowo et al. [14] and Doualla et al. [27] reported frequencies as low as 9% and 7.7%, respectively. Reports from South Africa have also shown a decreased frequency of photosensitivity [28]. The reason for such relatively low numbers may be due to the dark skin of the African population. Malar rashes, which are more common in Caucasians [29], were reported in only 25% of our patients. This is similar to the figure of 21% in a previous study in Southwest Nigeria [14]. However, it has been reported at higher frequencies in Morocco (68%) and Tunisia (68.7%) [24, 26].

Patients with SLE may not report oral ulcers because they are typically painless and may go unnoticed. In our series, oral ulcers were present in less than half of the study patients, which was the same as in other African studies [14, 16, 30]. Hair loss occurred in 44.2% of our patients, which is similar to the findings by Adelowo et al. [14] in Southwest Nigeria. Findings from other studies have shown variable frequencies of alopecia ranging from 10.34 to 65.7% [20, 31].

Neuropsychiatric lupus (NPSLE) was seen in one-quarter of the patients and was also found to be uncommon in some other studies in Africa and India [16, 24, 27, 31].

Headaches were the most common NPSLE symptoms, accounting for 21.2% of the study population, followed by psychosis (17.3%) and seizures (11.5%). Headache was also the most prominent NPSLE symptom in the studies by Adelowo et al. [14] and Talukdar et al. [20].

The incidence of renal disease in SLE varies depending on the population studied. Nephritis was found in 38.5% of our sample, and varying frequencies of 5.4% in Uganda [23], 24% in Kenya [16], and 49.5% in Tunisia [26] have been reported. Higher incidences of lupus nephritis have been reported in other African studies [13, 19, 32]. Proteinuria, red blood cells, urinary casts, and abnormal blood chemistry were all features of kidney disease. For logistic reasons, 24-hour urine for protein measurement and creatinine clearance was not done in our study group. Renal biopsy was also not done for these patients, which may explain the relatively low frequency of nephritis in this study and possibly other African studies [16, 27]. Kidney biopsy for histology is rarely performed in poor resource centres in Nigeria and Sub-Saharan Africa [14].

As a result, staging of lupus nephritis is usually not possible. Renal involvement in SLE among Negro Africans may occur earlier and follow a more severe course. Early renal biopsy in lupus nephritis helps in classifying lesions and selection of effective corresponding therapies. However, the lack of readily available microscopy and immunofluorescence facilities, especially in poor resource areas, has made this impossible.

The use of ESR in addition to clinical features as a screening tool in rural settings is not out of place, especially in patients who may not immediately have the funds for serological investigations. In this study, the ESR was invariably elevated in all patients, with almost half of them having an ESR of over 100 mm/hr.

In our study, all patients had a positive ANA test. Most studies discovered comparable levels of ANA positivity, typically greater than 80% [14, 16, 24, 27]. Ekwom in Kenya [32] and Bongomin et al. in Uganda [23] reported prevalence rates of 76.9% and 75.8%, respectively. These high rates have also been reported in European studies [33].

The antinuclear antibody assay is a highly sensitive test for SLE that is required to meet current diagnostic criteria for the disease [34]. Titres of 1 : 640 and higher were found in 63.5% of our patients. Four patients had titres above 1 : 5120. The most frequently observed staining pattern was speckled, which is consistent with findings from a previous study in Southwest Nigeria [14]. A Saudi Arabian study discovered comparable results [35]. However, in India, the opposite was discovered, with a predominance of homogeneous staining [36].

The anti-dsDNA antibody is specific for SLE. Anti-dsDNA and anti-Sm antibodies were detected in 69.2%

Table VI. Clinical and laboratory profile of systemic lupus erythematosus patients in cross-sectional studies across Africa

Author (country) Year	Taylor [13] (Zimbabwe) 1986	Wadee [30] (South Africa) 2007	Carey [18] (South Africa) 2008	Adelowo [14] (Nigeria) 2009	Khanfir [26] (Tunisia) 2013	Doualla [27] (Cameroun) 2014	Genga [16] (Kenya) 2015	Ahmed [19] (Sudan) 2017	Zian [24] (Morocco) 2018	Bongomin [23] (Uganda) 2020	Our series (Nigeria) 2021
Demographics											
Number of patients	31	226	76	66	749	39	100	62	50	56	52
Mean age	28	34	38.6	33	30.7	39.2	36.6	31	31.7	-	28
Female: male ratio	30 : 1	18 : 1	14.2 : 1	21 : 1	9.3 : 1	12 : 1	32.5 : 1	14.5 : 1	6.1 : 1	10 : 1	9.4 : 1
Clinical features [%]											
Mucocutaneous	-	-	86.9	-	81.7	28.2	78	-	80	-	78.8
Malar rash	61	58.4	69.7	21.2	68.7	15.4	54	43.5	68	60.7	25
Discoid rash	19	41.5	-	43.9	11.9	5.1	22	27.4	-	-	11.5
Photosensitivity	16	38.9	53.9	9	67.6	7.7	44	30.6	60	-	48.1
Alopecia	-	-	-	45	-	20.5	-	32.3	-	21.4	44.2
Arthritis	81	70.4	85.5	87	87.1	58.9	90	85.5	82	69.6	86.5
Oral ulcers	19	38.5	47.4	33	23.3	10.3	36	30.6	8	41.1	42.3
Serositis	23	18.1	-	25.8	49.7	10.3	28	16.1	-	21.4	40.4
Haematological	61	52.2	57.9	47a	81	72	67	53.2	46	25 ^a	69.2
Renal involvement	71	43.8	46.1	50	49.5	17.9	24	66.1	50	5.4	38.5
Neuropsychiatry	13	15.9	63.2	50	37	10.3	19	35.5	10	-	25
Autoantibodies [%]											
ANA	96	99.1	88.2	98.5	98	86.1	82	-	88	75.8	100
Anti-dsDNA	100	55.3	40.8	53.8	77.3	73.1	56	48.4	56	75.8	69.2
Anti-Sm	-	40.7	42.1	63.6	44.8	-	-	19.3	50	-	48.1
Anti-RNP	-	-	48.7	66.7	45.5	-	-	-	-	-	59.6
Anti-Ro	-	-	46.1	46.7	56.4	-	-	32.3	38	-	36.5
Anti-La	-	-	32.9	9	32.5	-	-	11.3	10	-	28.4

ANA – antinuclear antibody, anti-dsDNA – anti-double-stranded DNA, anti-La – anti-lupus anticoagulant, anti-RNP – anti-ribonucleoprotein, anti-Ro – anti-Sjögren's-syndrome-related antigen A, anti-Sm – anti-Smith, ^a – anaemia only, not available.

and 48.1% of patients in our study, respectively, and in 53.8% and 63.6% of patients in a similar study in Southwest Nigeria [14]. This discrepancy could be explained by the fact that we tested all patients in our study for these 2 autoantibodies, whereas Adelowo et al. [14] tested only a few patients at the time. The frequency of anti-dsDNA in our study is comparable to that observed in some African studies [26, 27] but significantly higher than that observed in South Africa [18, 30], Kenya [16], Sudan [19], and Morocco [24]. Patients with lupus are exclusively positive for anti-Sm autoantibodies. It has been demonstrated that its prevalence varies across populations. It has been reported to range between 19.3% in Sudan [19] and 75% in Gabon [37].

The anti-RNP autoantibodies were also positive in 59.6% of our patients, which is comparable to the result of Adelowo et al. in Nigeria [14] and Khanfir et al. in Tunisia [26]. Anti-Sjögren's syndrome-related antigen A (anti-Ro/SSA or anti-Ro) is said to be useful in SLE diagnosis, particularly in patients who test positive for ANA but not for anti-dsDNA [38]. In this study, 36.5% of patients were positive for anti-Ro. This is consistent with other previously conducted studies [14, 19, 24]. However, Adelowo et al. [39] in 2012 observed a greater prevalence of anti-Ro antibodies (69.7%) in a study evaluating autoantibodies in Nigerian lupus patients [39]. Previous research confirmed our findings about the low prevalence of anti-La/SSB [19, 24, 26, 39]. Anti-La antibodies are more prevalent in Sjögren's syndrome, and their presence in SLE may be predictive of the presence of the syndrome.

Although antiphospholipid (APL) antibody testing was not performed on all patients in our study, the frequency of APL was low (22.6%). Similar low prevalence rates have been recorded in previous research [37, 39]. In Cameroon, half of the patients were reported to be positive for anticardiolipin antibodies [27].

It is critical to state that the variance in prevalence of some autoantibodies observed across Africa may simply reflect the sensitivity of the various testing procedures utilized and possibly the cut-off levels of various populations. The high occurrence of autoantibodies, particularly ANA and anti-dsDNA, in this study supports the previous findings that Negroes have a higher frequency of immunological markers associated with SLE than Caucasians [40].

Hydroxychloroquine is the most widely prescribed drug for lupus patients in Africa, as reported in studies by Genga et al. [16] (77%), Doualla et al. [27] (69%), and Ekwom [32] (92%). A previous study by Adelowo et al. [14] in Southwest Nigeria in 2009 had very few patients placed on HCQ. This is because HCQ only became available in Nigeria a few years before the study. The majority (96.2%) of our patients were on HCQ, and all the patients were on steroids. None of the patients were

on biologics. This is due to unavailability and high costs. The high use of HCQ is attributable to the fact that it is readily available and inexpensive in our area. It has been approved for the treatment of SLE in compliance with international guidelines and it is shown to delay disease onset, decrease the frequency of flares, maintain remission, and decrease complication risks.

Other DMARDs used include azathioprine, mycophenolate mofetil, methotrexate, and cyclophosphamide, depending on the organ system's manifestation. Because SLE runs an aggressive course in Negro African patients, it is critical to start DMARDs as soon as possible. In Nigeria, there are issues of high default rates due to various cultural beliefs and unfulfilled expectations for a cure, as well as high management costs because most patients pay out of pocket due to poor insurance coverage. Therefore, the impact of the disease on the quality of life and socioeconomic effects can be determined by fully understanding the disease burden associated with SLE. This will make it easier to allocate resources to enhance the quality of life of people with SLE.

Study limitations

This study has several limitations, including a small study group, a predominantly student population, and our inability to perform kidney biopsies to evaluate patients with lupus nephritis. Additionally, its retrospective design precluded us from obtaining a great deal of information, such as treatment outcome evaluation. Because the data were collected from a single health facility, their generalizability may be limited.

To have a better understanding of the epidemiological features of SLE, a larger multicentre prospective study is needed. Another disadvantage is the inconvenience of obtaining serological testing, which is not routinely performed in public healthcare settings and must be obtained privately at the expense of the patient in our conditions.

Conclusions

Polyarthritis and mucocutaneous manifestations associated with elevated ESR and the presence of a high occurrence of autoantibodies (ANA/anti-dsDNA) seem to be useful in the diagnosis of lupus in this population. Knowledge of the characteristics of lupus in the Nigerian population will enable primary and secondary health care settings to make an early diagnosis and institute appropriate treatment. A larger multicentre prospective study is needed to validate our findings.

The authors declare no conflicts of interest.

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