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ORGAN INVOLVEMENT IN SYSTEMIC LUPUS ERYTHEMATOSUS (SLE) IN A NIGERIAN TEACHING HOSPITAL

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ABSTRACT

Background- SLE is a multi-systemic inflammatory condition and can present with multiple end organ damage. Early diagnosis and appropriate therapeutic intervention can however delay organ involvementin SLE.

Method- A retrospective study of all the admitted rheumatology cases including SLE over five years was carried out. SLE cases were further studied determining organ(s) that were affected. Relevant literature search was done.

Result- Organ damage was found in 16 out of the 26 SLE patients seen over five years. Multiple organ damage was seen in some patients. The most frequently affected system was the neuropsychiatric system and the least affected was the ocular. Malignancy, diabetes mellitus, peripheral vascular disease, and premature gonadal failure were not found to be affected in our patients. The most frequent individual items on the SLICC/ACR damage index were seizure and proteinuria. Two patients with renal lupus are still surviving till date, one was lost to follow up and the other three died due to lack of financial resources to continue with renal replacement therapy.

Conclusion- Neuropsychiatric involvement in SLE is common as demonstrated by earlier studies. This study has also demonstrated that renal involvement is a leading cause of death in SLE patients.

Running Title- Systemic Lupus Erythematosus, Organ Involvement, Multiple Organ Damage, Corticosteroid, Immunosuppressives.

INTRODUCTION

SLE is a complex autoimmune inflammatory disease seen predominantly in young adults especiallyaffecting women of child bearing age in 90% of cases. It is a multi-systemic disease. Diagnosis is made with the American College of Rheumatology criteria for the classification of systemic lupus erythematosus[1]. The survival of SLE patients has improved in the past four decades, with an estimated ten year cumulative survival of 80-90% reported from most centres[2,3]in contrast to a five year cumulative survival of less than50% in the 1950s[4]. Accumulated organ damage in SLE is measured by the systemic lupus international collaborating Clinics/American College of Rheumatology (SLICC/ACR) damage index, an instrument developed to measure accumulated organ damage that has occurred since the onset of SLE[5]. A higher mortality in SLE is associated with early damage as reflected by this index[6]. The aim of this study is to determine the pattern of organ damage and the treatment outcome in SLE patients in a tropical country of Nigeria with low socio-economic status.

METHODOLOGY

Patients: The SLE patients in this study were the confirmed SLE patients attending the outpatient clinics and those admitted at the OlabisiOnabanjo University Teaching Hospital, Sagamu, Ogun State, Nigeria. The inclusion criteria were- 1. At least four ACR criteria for the classification of SLE, 2. Positive ANA titre. 3. Age greater than 16 years, and 4. One or more organ damage.

Methods: Information were derived from the patients case notes. Demographic data including sex, age, and educational background were obtained. Diagnosis data including the onset period of SLE and the period the symptoms of the organ involved were first noticed were obtained. Organ damage was determined by the SLICC/ACR damage index.

Results: 16 SLE patients out of 26 diagnosed over a period of five years were admitted for various organs damage. There were 15 women (93.75%) and a male (6.25%), with a mean age of 30.4 years and a mean SLE duration of 2.6 years. Skin and musculoskeletal systems were involved in 100% of cases but were not the commonest damaged organs. Only one case of chronic scarring alopecia was found. Organ damage was present in all the 16 admitted patients. Some of them had multiple organ damage. The most frequently damaged system was neuropsychiatric, followed by the renal, then pulmonary and lastly cardiovascular. The most frequent individual items on the SLICC/ACR damage index were seizure and proteinuria. Treatment was with steroid, standard immunosuppresives (azathioprine, cyclophosphamide) and other medications as indicated. Three of those with lupus nephritis had dialysis but eventually died due to lack of financial resources to continue the dialysis therapy. One lupus nephritis patient was lost to follow-up and the other two are doing well. Two of the neuropsychiatric lupus patients died. The patients with cardiac and lung involvement are still doing well to date.

DISCUSSION

SLE being a multi-systemic inflammatory disease can affect and damage any organ. Damage is defined as non-reversible change occurring since diagnosis of SLE, ascertained by clinical assessment and present for at least six months[7]. The total damage in a patient with SLE may result from SLE itself or from any other pathologic process such as atherosclerosis, hypercoagulability, hypertension, therapy for SLE and, other co-morbid conditions. This study revealed the presence of organ damage in 61% of SLE patients with onset of disease between 2-5 years from diagnosis. Vilar MJP et al reported 33% organ damage in the study of 54 SLE patients in Brazil[8].Zonana et al also reported organ damage in 33% of SLE patients in Mexico patients with at least 5 years of disease duration[9]. The most frequently damaged organ was the neuropsychiatric (50%) in this study. Adelowo et al in a study of 64 SLE patients in a private rheumatology clinic in Nigeria reported 51.6% neuropsychiatric organ damage[10].Rivest et al, reported 20.5% neuropsychiatric organ damage in 200 SLE patients[11]. In a large cohort of 242 southern Chinese patients with SLE with mean disease duration of 75.3 months nervous system involvement was 18.4%[12]. The wide difference in the nervous system involvement in Nigeria and the advanced countries could be as a result of delayed

presentation. Many of our patients would have moved from chemist shops to spiritual homes and to the traditional healers before finally landed in the hospital setting. Because of paucity of rheumatologists in the country, such cases would have been managed by general practitioners who are not fast in the management of such cases, or better still physicians in other subspecialty areas. Organ damage in SLE can be due to various causes. The damage can be due primarily to the SLE itself or other co-morbid conditions such as, hypertension, atherosclerosis, hypercoagulability, and infections. The principal goal in the management of SLE cases is therefore the prevention of organ damage. A recent report concluded that once organ damage occurs in SLE, further damage is expected to occur, especially if disease activity persists[13]. Studies have suggested the association of organ damage with variables like socio-economic status, older age, and greater number of ACR criteria. This association was not observed in this study[14]. Organ involvement in SLE is very common. Early presentation and prompt referral to the specialist for management will go a long way in preventing early organ damage. Short-coming of this paper however was the small number of SLE patients involved in the study.

REFERENCES

Tan EM, Cohen AS, Fries JF. THE 1982 revised criteria for the classification of systemic lupus erythematosus. Arhtritis Rheum 1982; 25: 1271-1277.

Borchers AT, Keen CL, Shoenfeld Y, Gershwin ME. Surviving the butterfly and the wolf: Mortality trends in systemic lupus erythematosus. Autoimmunity Rev. 2004; 3 : 423-453.

Urowitz MB, Abu Shakra M, Gladman DD, Gough J, Farewell VT. Improved survival in SLE. J. Rheumat 1997; 24: 1051-1065.

Kataoka H, Koike T. Lupus mortality in Japan. Autoimmunity Rev. 2004; 3: 421-422

Gladman D, Ginzler E, Goldsmith C et al. The development and initial validation of the Systemic Lupus International Collaborating Clinics/American College of RheumatologyDamage Index for systemic lupus erythematosus. Arthritis Rheum 1996; 39: 363-369.

Rahman P, Gladman DD, Urowitz MB, Hallet D, Tam LS. Early damage as measured by the SLICC/ACR damage index is a predictor of mortality in systemic lupus erythematosus. Lupus 2001; 10: 93-96.

Gladman DD, Ginzler E, Goldsmith C, Fortin P, Liang M, Urowitz M etal. Workshop report: Systemic Lupus International Collaborative Clinics (SLICC): development of a damage index in SLE. J Rheumtol 1992; 19: 1820-1821.

Vilar MJP, Lira E, Bezerra M, Sato EI. Skin is the most frequent damaged system in recent-onset systemic lupus erythematosus in a tropical region. ClinRheumatol 2005; 24: 377-380.

ZonanaNacach A, Camergo-Coronel A, Yanez P et al. Measurement of damage in 210 Mexican Patients with systemic lupus erythematosus: relationship with disease duration. Lupus 1998; 7: 119-123.

Adelowo OO, Oguntona SA, Ojo O. Neuropsychiatric systemic lupus erythematosus among Nigerians. Afr J Med Sci 2009; 38: 33-38.

Rivest C, Lew RA, Welsing PM et al. Association between clinical factors, socioeconomic status and organ in recent onset systemic lupus erythematosus. J Rheumatol 2000; 27: 680-684.

Mok cc, Ho CT, Wong RW, Lan CS. Damage accrual in Southern Chinese patients with systemic lupus erythematosus. J Rheumatology 2003; 30: 1513-1519.

Alarcon GS, Roseman JM, McGwin G Jn, Uribe A, Bastian HM, Fessler BJ et al. LUMINA Study Group. Systemic lupus erythematosus in three ethnic group XX. Damage as a predictor of further damage. Rheumatology (Oxford) 2004; 43: 202-205.

Karison FW, Dlatroy LH, Lew RA et al. The relationship of socioeconomic status, race, and modifiable risk factors to outcomes in patients with systemic lupus erythematosus. Arthritis Rheum 1997; 40: 47-56.

Table 1: Rheumatological Admission Pattern at Olabisi Onabanjo University Teaching Hospital
Jan 2006 - Dec 2010

SLE	16 (22%)
Rheumatoid arthritis	42 (58%)
Gout	2 (2.8%)
Juvenile idiopathic arthritis	3 (4.2%)
Scleroderma	4 (5.6%)
Juvenile polymyositis	1 (1.4%)
Secondary Sjogren's syndrome	1 (1.4%)
Septic arthritis	2 (2.8%)
TB rheumatism	1 (1.4%)

Table 2: Organ Involvement in SLE

Skin	16 (100%)
Joint	16 (100%)
Neuropsychiatry	8 (50%)
Cardiac	3 (19%)
Renal	6 (38%)
Lung	4 (25%)