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A Woman with 10 Years Clinical History of Systemic Lupus Erythematosus

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ABSTRACT

Systemic lupus erythematosus is the multisystemic autoimmune disorder with a larger spectrum of clinical symptoms encompassing almost all organs and tissues. The disease appears to be more common rural areas than others due to negligence. Sixty-five per cent of patients with SLE have disease onset between the ages of 16 and 55 years, 20% present before age 16, and 15% after the age of 55. In this case report described about a clinical history of 26 years young women with 10 years history of lupus erythematosus. This reports comprises different stages first is preliminary stage then in second stage patient diagnose with cutaneous lupus erythematosus at age of 14-18 years. At final stage cutaneous lupus erythematosus developed into systemic lupus erythematosus. Anti-nuclear antibody test especially performed for its diagnosis and corticosteroids were used for to manage this disease. After few months treatment patient health evaluated by laboratory tests and compares these reports with initial ones. In Systemic lupus erythematosus multiple body systems affected and this cannot be easily diagnose. Malar rash and red flat patches are in its initial symptoms which lead to severe complications which may be arthritis, renal involvement, neuro-disorders and pancreatitis. For to overcome this problem we can checkup properly and well diagnosed by laboratory tests and its duty of health care officers.

Keywords: Systemic lupus erythematosus, Autoimmune diseases, Auto-antibodies

INTRODUCTION

Systemic lupus erythematosus (SLE) is a ravaging autoimmune disease of world-wide distribution with unknown origin or cause and no known cure in which tissues and cells are damaged by the action of autoantibody and immune complexes on body organs and tissues. The extreme heterogeneity of the disease has led some investigators to propose that SLE represents a syndrome rather than a single disease. The disease is hassle worldwide and can affect any race. It is most commonly found amongst women of childbearing age. This disease is 9 times more common in females than males. Despite the scarcity of information concerning the disease, genetic and environmental factors seem to be the essential contributors towards the development and exacerbation of SLE [1-8]. Previous studies on SLE indicated that the prevalence of this disease was more common in Europe, Brazil, and USA than Asia. Prevalence rates in lupus are estimated to be as high as 51 per 100 000 people in the USA and 2-8 per 100,000 in North America, South America per year. The diverse clinical manifestations of SLE present a challenge to the clinician. Several mechanisms lead to a loss of self-tolerance and organ dysfunction. In its pathogenesis the SLE effected by different mechanisms and diagnosed when anti-nuclear antibodies rate increased, Rheumatoid factor is positive and anti-double stranded DNA is also positive. There is no any specific treatment for this but corticosteroids and cyclophosphamides are used which has more side effects.

CASE PRESENTATION

Family history

A patient whose father had mycobacterium tuberculosis and one of his older brothers had Asthma.

Personal history

In his childhood when she was 8 years of age due to road accident, she gain severe injury of legs and backache but by

treatment she recovered completely from this. Later at 15 years of age she had skin rashes that are typically butterfly like rashes. She came to doctor but doctor prescribed him medication without any laboratory diagnosis because now the patient had not any other sever complication.

In 2010, now the patient 20 years old and now the patient experienced butterfly rashes on face and flat red patches on arms with some other complications. Now this time laboratory investigation tests were performed as physician assumption that this may be any type of lupus infection. By laboratory tests patient was diagnosed with cutaneous lupus erythematosus. On examination of blood serum value of antinuclear antibodies ratio (ANA)=1:640 and nuclear antigen test was also positive (reference value=Negative). Mostly butterfly rashes appeared in summer months, so these rashes and red patches was treated with Corticosteroid Ointment which is a prednisone (20 mg twice a day) [9,10].

Systemic lupus erythematosus: Now the patient becomes 24 years old and now she suffered with sleepiness disorder and severe headache. Due to severe headache magnetic resonance inductance (MRI) was performed which shows inflammation in white matter and meninges. She was only suffered with headache instead of any other neurological disorders. At this stage shows that the ANA ratio=1:1280 which is increased than before nuclear antigen test was also positive, anti-double stranded DNA was also positive and rheumatoid factor=Positive (reference value=negative). Other blood tests for to check immunity, hemoglobin value, lymphocytes count was also performed whose values shown in Table 1.

In this year the patient as admitted in hospital emergency department due to also suffered with some other complications like; severe fatigue, myalgia, abdominal pain, nausea and urticarial, etc.. Patient was treated with hydroxyquinoline and corticosteroids with other medicated agent for next 18 months. Dosage regimen for corticosteroid that 50-70 mg/ Daily used for next 18 months and this treatment was carried out by dermatologist of Medicare Hospital Gujranwala, Pakistan.

After its treatment completion then patient was 26 years of age in 2016, laboratory tests were performed again whose values were reduced but not in normal ranges which was shown in Table 1.

Patient also experienced and suffered with some complications now whose intensity can be reduced but cannot eliminate completely. Now patient was in chronic stage of disease. Symptoms experienced by patient at different stages can be understood by Table 2.

Table 1: Laboratory test values comparison of before treatment and after treatment of systemic lupus erythematosus

Variable	Reference Ranges	Before Treatment	After Treatment
Haematocrit (%)	38.0-51.0 female	35.3	37.8
Haemoglobin	12.5-16.5 female	11.4	12.3
White blood cells (per mm^3)	4300-10500	11000	9500
Neutrophil %	40-70	82	63
Lymphocytes %	22-44	11	21
Monocytes %	3-10	3	08
Platelets count (per mm^3)	150000-400000	127343	156000
Prothrombin time (s)	10.4-13.2	23.3	15.3
INR			
Iron (µmol/L)	42-156	Nil	31
Sodium (mmol/L)	135-145	138	142
Potassium (mmol/L)	3.4-4.8	3.6	3.7
Urea nitrogen (mg/dl)	8-25	26	49
Creatinine (mg/dl)	0.6-1.5	2.7	2.3
Albumin (g/dl)	3.3-5.0	Nil	Nil
Aspartate aminotransferase (µL)	10-40	261	117
Alanine aminotransferase (µL)	10-55	179	97
Creatine kinase (µL)	60-400	581	307
C-Creative Protein (mg/L)	<8.00	Nil	32.5
Antinuclear antibodies	Negative at 1:60	1:1280	1:640, 1:320
Extractable nuclear antigens	Negative	Positive	Nil
Anti dsDNA	Negative	Positive	Positive
Rheumatoid Factor	Negative	Positive	Positive

Table 2: Signs and symptoms related to time course of systemic lupus erythematosus

Signs and Symptoms	2010-2011	2012-2013	2014	2015	2016
Malar Rash (Butterfly Rash)	++	+	++	+	+
Sun Allergy	++	++	++	+	+
Arthritis/ Arthralgia	ND	+	++	+	ND
Headache	+	+	++	++	+
Neurological Disorders	+	ND	+	ND	
Myalgia	+	ND	+	+	ND
Anaemia	ND	+	+	+	ND
Shortness of Breathe	+	+	+	+	+

ND: Not Defined; + Moderate; ++ Severe

DISCUSSION

Systemic lupus erythematosus is a chronic autoimmune disease in which the immune system produces antibodies to cells causing inflammation and tissue damage. Flat patches and butterfly rashes on face and arms may associate with cutaneous lupus erythematosus. SLE is autoimmune disorders effect multiple organs. It involves both humoral and cellular aspects of the innate and acquired immune systems. In this case report a patient did not effected this genetically or family history. A patient may be affected due to environmental factors or due to photosensitivity mainly. In most cases of SLE we can't diagnose the patient sometimes and lose the patient. In this study complete history of systemic lupus erythematosus was described with the addition of cutaneous lupus erythematosus (Table 2).

The most common symptoms/complication related to SLE include: arthritis, Skin patches, renal disorders, Neurological disorders, gastrointestinal symptoms whose prevalence is 66%, 57%, 35%, 46%, 39%, respectively.

SLE is an autoimmune disease that predominantly affects women and typically has manifestations in multiple organs. Immune-system aberrations, as well as heritable, hormonal and environmental factors, contribute to the expression of organ damage. Immune complexes, autoantibodies, auto reactive lymphocytes, dendritic cells, and local factors are all involved in clinical manifestations of SLE.

Cutaneous erythematosus typically associated with early symptom of Systemic lupus erythematosus which about 4-6 years later developed into SLE.

Systemic lupus erythematosus mainly related to increase in the number of anti-nuclear antibodies bind to the nucleus of cell contents. Over 90 percent test result of ANA is positive for to identify the SLE. Other diagnosis tests are rheumatic factor and anti-double stranded DNA also positive.

Due to this longer duration of in disease state as in this case reports showed multiple organs were damaged and not work properly for to spend normal life so for this care must be taken and inhibit to trigger those factors that caused to elevate the complications related to this disease.

So, for to control this disease patient must be well managed and laboratory tests are regularly performed for to evaluate the recent condition of patient. Different diagnostic tests as ANA ratio test.

CONCLUSION

Systemic lupus erythematosus is an immunity related disorder which affected multiple body organs. In this case we describe the clinical history of patient. It's not easy to diagnose this so its duty of family physician to diagnose and care about this. This disease more common in women's especially in their reproductive ages. So for to overcome this disorder by regularly laboratory tests are performed and managed well.

PATIENT CONSENT

A written informed consent for this case report and analysis of the patient has been obtained from the patient.

DISCLOSURE STATEMENT

The authors report no conflicts of interest. The authors alone are responsible for the content and writing of this article.

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