Clinic and Laboratory Evaluation of Our Patients with Late Onset Systemic Lupus Erythematosus

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SUMMARY

SLE is an autoimmune disease with unknown aetiology and predominantly affects young women. It has been reported that late onset SLE has good prognosis. In this study, the clinical and laboratory features were compared between 100 patients with early and 35 with late onset (>50 years old) SLE. In our study, we evaluated retrospectively 100 patients (15 male, 85 female, mean age 29.7±7.1) with SLE whose disease onset was under 50 years and 35 SLE patients with late onset (6 male, 29 female, mean age 53.7±2.5). Mean duration of the disease was 4.97±4.53 years in patients with early onset and 2.12±1.42 years in patients with late onset SLE. Mean duration of diagnosis was 6.10±5.94 months in early onset group and 11.15±3.45 months in the late onset group. Arthritis, hepatomegaly, Sicca syndrome and hematological involvement were frequently seen, renal and CNS involvement rarely seen in patients with late onset SLE (p<0.05). Vasculitis, pleuritis, pericarditis, skin involvement, myocarditis, LAP, splenomegaly, oral ulcers, alopecia, myositis were seen in both of the groups without significant difference (p>0.05). In our study, in patients with late onset SLE had better prognosis.

Key Words: Elderly, SLE, clinical manifestations

ÖZET

Geç Başlangıçlı Sistemik Lupus Eritematosuslu Hastalarımızın Klinik ve Laboratuvar Değerlendirmesi

SLE etyolojisi bilinmeyen bir otoimmun hastalıktır ve öncelikle genç kadınlara etkiler. Geç başlangıçlı SLE’nin iyi prognozu olduğu bildirilmiştır. Bu çalışmada 100 erken ve 35 geç (50 yaş üstü) başlangıçlı hastaların klinik ve laboratuvar özellikleri karşılaştırıldı. Çalışmamızda hastalığı 50 yaş altında başlayan 100 (15 erkek, 85 kadın, ortalama yaş 29.7±7.1) ve geç başlayan 35 (6 erkek, 29 kadın, ortalama yaş 53.7±2.5) SLE’li hastanın retrospektif olarak değerlendirildi. Orlatalama hastalık süresi, erken başlangıçlı hastalarda 4.97±4.53 yıl, geç başlangıçlı hastalarda 2.12±1.42 yıl idi. Orlatalama tam süresi, erken başlangıçlı grupta 6.1±5.94 ay, geç başlangıçlı grupta 11.15±3.45 ay idi. Geç başlangıçlı hastalarda artrit, hepatomegali, Sicca sendromu ve hematolojik tutulum daha sik, renal ve SSS tutulumu daha nadirdi (p<0.05). Vaskülit, plörit, perikardit, cilt tutulumu, myokardit, LAP, splenomegali, oral ulser, alopesi, ve myozit her iki grup arasında anlamlı farklılık göstermedi. Çalışmamızda geç başlangıçlı SLE’li hastalar daha iyi prognoza sahipti.

Anahtar Kelimeler: Yaşlılık, SLE, klinik özellikler
INTRODUCTION
Systemic lupus erythematosus (SLE) is a systemic disease with a wide spectrum of clinical and laboratory manifestation. It predominantly affects young women. The extensive cutaneous, musculoskeletal and visceral manifestations of this disease especially in younger women patients, are often associated with limitation of activities and decreased life expectancy. Demographic characteristics, particularly race (1-5) sex (6) and young age at disease onset (5,7,8) have also been shown to affect the clinical presentation of SLE. One subgroup comprises persons with the onset of SLE later in life, usually after the age of 50 years. Several investigators have reported that age at onset and at diagnosis have a modifying affect on disease expression (9,10).

The aim of our investigation was to study clinical and immunological features in patients with SLE in relation to both age at onset and at diagnosis and to determine whether any relationship existed between disease patterns and age.

PATIENTS and METHODS
We studied 135 patients with SLE who had been seen at Ibn-i Sina Hospital and SSK Etlik Hospital as either inpatients or outpatients between 1990 and 1998. All patients fulfilled at least 4 American Rheumatism Association classification criteria (11). Systemic SLE erythematosus was diagnosed in 35 patients after the age at 50 (late onset group) and in 100 patients before the age of 50 (younger-onset group). The age limit was established arbitrarily according to previous reports (5,7,9,12,13). Clinical features in these patients were assessed by retrospective review and included:
1. Age at diagnosis,
2. Evidence of clinical renal involvement (proteinuria higher than 500mg/day or abnormal urine sediment),
3. Central nervous system (CNS) involvement,
4. Cutaneous involvement,
5. Serositis (pleuritis, pericarditis or both),
6. Raynaud’s phenomenon.

Laboratory investigations including complete blood count, ESR, renal and liver function test, antinuclear antibody (ANA) (indirect immunofluorescence method), anti-ds DNA antibody (Farr assay), complement assays, rheumatoid factor, VDRL (flocculation test), antibodies to extractable nuclear antigens (Ro, La) (double immunodiffusion method) and anticardiolipin antibodies (ELISA).

Statistical comparison of clinical features and laboratory results between the early and late onset SLE were carried out Fisher’s exact test and Mann Whitney-U test.

RESULTS
The female/male ratio for the early onset patients was 85/15, in contrast to 29/6 in the late onset group. The mean age of onset of SLE for the early onset group was 29.7±7.1 years (range 15-48) and late onset group was 53.7±2.5 (51-59) years. The mean interval between onset of symptoms to diagnosis for the late onset group and the early onset group were 11.15±3.45 and 6.10±5.94 months respectively. Mean duration of disease was 4.97±4.53 years in the early onset patients and 2.12±1.42 years in the late onset patients.

The frequency of SLE manifestation at presentation and on follow up for the 2 group, are listed in Table 1. Arthritis, hepatomegaly and liver disfunction, sicca syndrome, leukopenia, thromboctopenia were significant clinical manifestation in the late onset group. The late onset group also had significantly elevated liver enzymes which were not due to other condition or drugs (p<0.001). Though renal and CNS involvement were seen frequently in the early onset group (both of two p<0.05). There were no sex and age related serological differences between the groups.

DISCUSSION
SLE is a chronic inflammatory disorder of unknown cause with a wide spectrum of both clinical and immunological features. Sex hormone and genetic factors may have contributed to pathogenesis. Population studies of SLE revealed that 3% to 20% of SLE patients have late onset of their disease (5,14). Nevertheless, overall experience with older-onset SLE is not extensive and the precise prevalence of clinical and serological findings differs from the study to study (10,15-17). Although some authors found no difference in the female/male ratio with aging, our observations suggested that female predominance is not so pronounced in the late onset group.

The clinical expression of SLE in elderly patients differs in several aspects from the disease in young adults (5,7,9,12,13). Different presenting clinical symptoms in late onset SLE had been reported in va-
rious studies. In our serie, the interval between the onset of symptom and the time of diagnosis in late-onset SLE appears to be prolonged compared with the interval in younger people with arthritis, liver dysfunction, Sicca syndrome, leukopenia, thrombocytopenia were common. Although some authors have reported that rash, alopecia, fever, myositis manifestations were the most common presenting features in their patients (18-20), we found a similar incidence of these manifestation in both groups. In one study have reported that malar rash was less frequent at onset and during subsequent evolution of SLE (21).

Age also influences the serological findings of SLE. The explanation for age related variability in expression of the disease is still unclear. Genetic predisposition or responsiveness of an aging immune system may be implicated (9,12,13,22). It has been sugges-

### Table 1. Frequency of SLE manifestations at presentation and during followup for early and late onset SLE patients.

<table>
<thead>
<tr>
<th>Clinical features</th>
<th>Initial presentation</th>
<th>During followup</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Early onset</td>
<td>Late onset</td>
</tr>
<tr>
<td>Arthritis</td>
<td>45</td>
<td>71</td>
</tr>
<tr>
<td>Raynaud's phenomenon</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>Malar rash</td>
<td>63</td>
<td>57</td>
</tr>
<tr>
<td>Photosensitivity</td>
<td>68</td>
<td>66</td>
</tr>
<tr>
<td>Fever</td>
<td>62</td>
<td>66</td>
</tr>
<tr>
<td>Sjögren's syndrome</td>
<td>11</td>
<td>37</td>
</tr>
<tr>
<td>Pleurisy</td>
<td>25</td>
<td>17</td>
</tr>
<tr>
<td>Pericarditis</td>
<td>9</td>
<td>5</td>
</tr>
<tr>
<td>Alopecia</td>
<td>44</td>
<td>28</td>
</tr>
<tr>
<td>Myalgia</td>
<td>38</td>
<td>28</td>
</tr>
<tr>
<td>Nephritis</td>
<td>28</td>
<td>3</td>
</tr>
<tr>
<td>CNS involvement</td>
<td>14</td>
<td>0</td>
</tr>
<tr>
<td>Hepatomegaly</td>
<td>4</td>
<td>35</td>
</tr>
<tr>
<td>LAP</td>
<td>10</td>
<td>3</td>
</tr>
</tbody>
</table>

NS: non significant

### Table 2. Cumulative laboratory findings between early and late onset SLE.

<table>
<thead>
<tr>
<th>Laboratory test</th>
<th>Late onset</th>
<th>Early onset</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hemolytic anaemia</td>
<td>11/35</td>
<td>24/100</td>
<td>NS</td>
</tr>
<tr>
<td>Leukopenia</td>
<td>21/35</td>
<td>38/100</td>
<td>p&lt;0.05</td>
</tr>
<tr>
<td>Thrombocytopenia</td>
<td>17/35</td>
<td>32/100</td>
<td>p&lt;0.05</td>
</tr>
<tr>
<td>Elevated liver enzymes</td>
<td>12/35</td>
<td>4/100</td>
<td>p&lt;0.001</td>
</tr>
<tr>
<td>ANA</td>
<td>35/35</td>
<td>100/100</td>
<td>NS</td>
</tr>
<tr>
<td>Anti dsDNA</td>
<td>35/35</td>
<td>100/100</td>
<td>NS</td>
</tr>
<tr>
<td>Anti Ro</td>
<td>4/28</td>
<td>13/58</td>
<td>NS</td>
</tr>
<tr>
<td>Anti La</td>
<td>2/26</td>
<td>5/58</td>
<td>NS</td>
</tr>
<tr>
<td>RF</td>
<td>12/35</td>
<td>27/100</td>
<td>NS</td>
</tr>
<tr>
<td>Hypocomplementemia</td>
<td>28/35</td>
<td>88/100</td>
<td>NS</td>
</tr>
<tr>
<td>Antiphospholipid antibodies</td>
<td>2/25</td>
<td>5/72</td>
<td>NS</td>
</tr>
<tr>
<td>VDRL</td>
<td>5/35</td>
<td>18/35</td>
<td>NS</td>
</tr>
</tbody>
</table>
that older and younger patients may have different genetic determinants of disease and may respond to different triggering mechanisms (10,23).

Prognostically, late onset SLE has been considered a milder disease than early onset SLE (24). In fact, an inverse correlation between the severity of SLE and the age of diagnosis has been suggested (25). Reported studies have shown that late onset SLE differed from the early onset group in clinical presentations, pattern of organ involvement, severity of disease and prognosis (7,9,11-13,17). In our study, in the early onset group, renal and CNS involvement were the most common presenting features. In many studies, although there is no difference CNS involvement in both of the patients group (10,26,27), renal involvement is seen in the early onset SLE patients (10,18,20,26). Although some authors (7,10,28,29) have reported that serositis and pulmonary involvement were the most common presenting features in their patients we found a similar incidence of these manifestations in both groups (18). Cumulative frequency of clinical features in late onset SLE is shown Table 3.

Age also influences the serological manifestations of SLE. In some studies, anti ds-DNA antibodies were found in low titration in late onset patients (17,18). In our study, there was no significant difference in both of the groups. Compared to previous studies (10,18,20) leukopenia, thrombocytopenia were relatively common in our late onset group.

As a result, patients with late onset SLE have better prognosis and have less complicated treatment. In our patients, arthritis, hepatomegaly, sicca syndrome and hematological involvement were commonly seen; this may be related to ethnic factors.

REFERENCES


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