LUPUS NEPHRITIS: HISTOLOGICAL FEATURES AND LONG TERM OUTCOMES IN A LARGE SINGLE-CENTRE COHORT

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Background: In Systemic Lupus Erythematosus (SLE) patients the incidence of lupus nephritis (LN) is about 40% [1]. The rate of progression to end stage renal disease (ESRD) is 4.3-10.1% [2] and renal involvement is a strong predictor of morbidity and mortality.

Objectives: To describe clinical, histological features and renal outcomes of LN patients included in our single-center registry reporting data from more than 30 years. Moreover, we examined the correlation between clinical features at LN diagnosis and therapeutic lines used during the course of a 24 years follow-up.

Methods: A total of 71 patients were diagnosed with LN from 1989 to 2020. Demographic features and laboratory abnormalities (serum creatinine, 24 hours urine protein, urinary sediment, ds-DNA) at the time of LN diagnosis and at last available follow-up, were evaluated. We also examined renal biopsy performed and the histological classes (proliferative vs non-proliferative). We considered the increase number of therapeutic lines adopted as a negative prognostic factor in response to therapy. Mean (SD) or median (IQR) were used according the variable distribution. T-test and Chi square and Mann-Whitney were used and p-value <0.05 were considered significant.

Results: Among 71 patients with LN, 63 (88.7%) were females and 8 (11.3%) males, with a F/M ratio of 6:1. Median SLE duration was 180 (162) months. The median age at the onset of nephritis was 28 (19.5) years and occurred in median after 12 (60) months from SLE diagnosis.

Sixty patients underwent a biopsy: the histology showed class III or IV proliferative glomerulonephritis in 49 patients (81.6%) and a non-proliferative class in 11 (18.3%) (p<0.0001). Median serum creatinine value, 24 hours urine protein, urinary sediment, anti-ds-DNA at LN onset are reported in Table 1. Induction therapy was performed with cyclofosfamide in 14.5% of cases, mycophenolate in 21.1%, rituximab in 1.9% and azathioprine in 4.6%. The lines of therapies adopted during the follow-up ranged between a minimum of 0 and a maximum of 6 lines with a median value of 1.

Overall, the median follow-up was 180 (111) months and 30 (21.3%) patients had at least 120 months of follow-up. Median serum creatinine value, 24 hours urine protein, urinary sediment and eGFR last available follow-up are reported in Table 1. Three patients underwent dialysis and 3 kidney transplantation. Eight patients underwent a re-biopsy: 7 (87.5%) had a proliferative class and 1 (12.5%) had a membranous class (p=0.01). Median serum creatinine value, 24 hours urine protein, urinary sediment re-biopsy are reported in Table 1. In re-biopsied subgroup patients, induction therapies were cyclofosfamide in 50% of cases, mycophenolate in 25% and azathioprine in 12.5%.

There were not statistically significant differences among the age on LN onset, cases, mycophenolate in 12.5%, cyclosporine A in 25% and azathioprine in 4.6%. The number of therapeutic lines adopted (Figure 1).

Conclusion: Among patients with LN the proliferative classes are the most common. At the 15-year follow-up 2.1% had renal transplantation and 2.1% dyalisis.

Disclosure of Interests: None declared

REFERENCES:

Table 1. Laboratory features in SLE patients at LN onset, at last available follow-up and in re-biopsied patients.

<table>
<thead>
<tr>
<th>Feature</th>
<th>LN onset (n=71)</th>
<th>After 10 years long FOLLOW-UP (n=30)</th>
<th>P value</th>
<th>Re-biopsied patients (n=8)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serum creatinine (mg/dl)</td>
<td>0.81 (+/− 0.4)</td>
<td>0.27 (+/− 0.66)</td>
<td>&lt;0.0001</td>
<td>1.05 (0.45)</td>
</tr>
<tr>
<td>24 hours urine protein (mg/g)</td>
<td>3000 (+/− 3707)</td>
<td>3300 (+/− 793)</td>
<td>&lt;0.0001</td>
<td>5068 (2392)</td>
</tr>
<tr>
<td>Active urinary sediment</td>
<td>64 patients (45,44%)</td>
<td>2 patients (6.66%)</td>
<td>&lt;0.00001</td>
<td>8 patients (100%)</td>
</tr>
<tr>
<td>Anti-ds-DNA + eGFR &lt;0.05mH</td>
<td>30 patients</td>
<td>12 patients (3.6%)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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DOI: 10.1136/annrheumdis-2021-eular.3742