



جامعة الفيوم
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ملخص بحث (البحث السابع)

Title: Outcome of Proliferative Lupus Nephritis with Thrombotic Microangiopathy; An Ambispective Observational Single-Center Study

ABSTRACT

Background :Thrombotic microangiopathy (TMA) represents a broad spectrum of diseases. The combination of TMA with lupus nephritis (LN) is associated with worse renal outcomes and a higher mortality rate. To date, there is no agreement on the therapeutic strategies that should be offered to TMA-LN patients.

Objective :In this study, we compared the long-term outcomes of plasma exchange (PLEX) and cyclophosphamide (CYC) in a TMA-LN cohort.

Methods: 100 TMA-LN patients who received an induction of steroids and either PLEX or CYC less than 3 months from the start of the study, were selected from the medical records of Kasr Alainy hospitals, Cairo University. The patients were monitored for hematological and renal response at 3, 6, and 12 months.

Findings : In PLEX arm, the mean creatinine level was 1.4 ± 0.7 mg/dl at baseline, decreased to 1.1 ± 0.5 mg/dl after 3 months, and returned to 1.4 ± 1.4 mg/dl at 6 and 12 months ($p = 0.748$). Proteinuria levels significantly decreased from 2.9 ± 0.7 g/24 hrs at baseline to 0.4 ± 0.5 g/24 hrs after 12 months ($p < 0.001$). PLT significantly increased over time with a mean of 65.6 ± 19.0 ($\times 10^3$)/L at baseline, increasing to 235.9 ± 54.3 ($\times 10^3$)/L after 12 months ($p < 0.001$). In CYC arm, the mean creatinine level of 1.2 ± 0.6 mg/dl was maintained from baseline through 6 months but significantly increased at 12 months with a mean of 1.9 ± 2.2 mg/dl ($p = 0.005$). Proteinuria levels significantly decreased with means of 3.3 ± 0.6 g/24 hrs at baseline to 0.7 ± 0.9 g/24 hrs after 12 months ($p < 0.001$). The PLT increased from 49.5 ± 19.0 ($\times 10^3$)/L to 198.9 ± 71.5 ($\times 10^3$)/L after 12 months ($p < 0.001$). At 3- and 12-month intervals, PLEX achieved sustained lower proteinuria ($p < 0.001$ and $p = 0.047$, respectively), higher PLT ($p < 0.001$ and $p = 0.005$, respectively), and higher complement 4 ($p = 0.001$ and $p < 0.001$, respectively), compared to CYC.

Conclusion :Both groups demonstrated significant improvements in renal and hematological outcomes with better long-term renal outcomes in the PLEX arm and comparable improvements in the hematological measures in both groups.

Keywords: Thrombotic microangiopathy, Lupus nephritis, Systemic lupus erythematosus, Plasmapheresis, Cyclophosphamide

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