

Long-term outcomes after treatment with low-dose IV cyclophosphamide in black patients with lupus nephritis.

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Introduction:

Lupus nephritis has ethnic variations in disease activity, prognosis, and response to treatment. Low-dose Euro-Lupus cyclophosphamide has been demonstrated to be an effective treatment for lupus nephritis. As the ELNT trial[1] consisted of a predominantly Caucasian population, data on its use in black patients are limited to the placebo arm of the ACCESS (Abatacept) study (n=25)[2]. We reviewed outcomes of black patients with lupus nephritis treated with the Euro-Lupus regimen at our centre.

Methods:

Patients who had received cyclophosphamide were identified by a search on the renal database. The charts of patients who had received low dose IV cyclophosphamide for lupus nephritis between 2004-2018 were reviewed. Data was analysed with reference to response criteria from the ALMS[3] and ELNT trial.

Results:

24 patients were identified, demographics and baseline data is shown in the table.

All patient received maintenance with MMF or azathioprine after Euro-Lupus unless they had reached ESKD. 6 patients also received rituximab. At 6 months, 8/24 patients had a treatment response by ALMS criteria of these, 4/24 had a complete response. The ELNT definition of treatment failure at 6 months was met in 12/24 patients.

During the follow period 4/24 patients died and 6/24 reached ESKD. The incidence of major adverse kidney outcomes (MAKE: dialysis, death, sustained doubling of creatinine) is shown in figure 1A. Incident proteinuria was similar in patients with good and poor long-term outcome but was significantly lower at 6 months in patients with a good long-term outcome (Figure 1B).

Discussion:

Practice at our unit has been to use Euro-Lupus in patients intolerant of MMF, or with severe or treatment resistant disease. This group is likely to consist of patients with higher disease aggression and chronicity than those described in the trials. This is supported by comparison of the mean creatinine (202µmol/L) to that in the ELNT (91µmol/L) and ACCESS (114µmol/L) cohorts. The overall response rate observed in our cohort (33%) was inferior to that reported in black patients in the ACCESS trial (56%) although the complete response rates were similar (17% vs 16%). In keeping with the low response rate, 50% of patients had reached a MAKE endpoint within 3 years. An early reduction in proteinuria was associated with improved prognosis. These data suggest that in black patients with aggressive or treatment refractory disease, outcomes after treatment with low dose cyclophosphamide are poor. There is a need to define more effective treatment strategies for this group.