Renal Relapses Are Common in Lupus Nephritis

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Background

Renal relapses are part of the natural history of lupus nephritis (LN) and represent a significant challenge not only because they are associated with an increased risk of decline in renal function, but also there is a cumulative toxicity of immunosuppressive treatments. For maintenance treatment of LN, either Azathioprine (AZA) or Mycophenolate Mofetil (MMF) are recommended, whilst Hydroxychloroquine (HCQ) should be used as an adjunctive treatment.[1]

Methods

In this retrospective study, we aimed to review renal flare frequency and management in a large single centre cohort of adult LN patients. We identified 119 patients diagnosed with biopsy proven LN between 1992 and 2013 from our electronic database. LN classes based on glomerular pathology were defined according to the ISN/RPS 2003 classification. Clinical and laboratory data were obtained from electronic records of patients. Clinic letters and laboratory results were reviewed to identify all flares.

Results

are shown in the tables and figures. 33% of patients who previously achieved at least partial remission had a flare. The median time from remission to relapse tended to be shorter in case of PR (13 months) than CR (29 months). At time of relapse, most patients were either receiving MMF (42%) or AZA (32%), and 71% were also taking oral Prednisolone. Nearly half of the relapsed patients were treated with a new immunosuppressive drug, mostly Cyclophosphamide (CYC, 46%) or MMF (38%). 8% of patients did not achieve remission despite immunosuppressive treatment.

Definitions

Complete remission (CR): proteinuria <0.5 g/day and stable or improved serum creatinine.

Partial remission (PR): >50% reduction in baseline proteinuria achieving <2 g/day, and stable or improved serum creatinine.

Proteinuric flares: proteinuria >1 g/day in patients with CR, and doubling of proteinuria in cases of PR.

Results 1. Remission and relapse rate

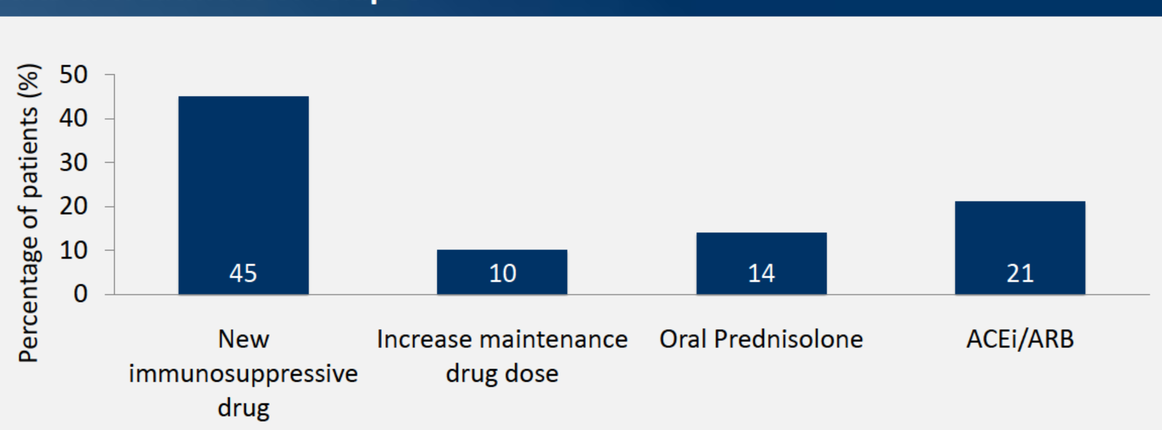
LN cohort, n	119
Remission, n (%)	104 (87)
CR	84 (81)
PR	20 (19)
Relapse, n (%)	34 (33)
Preceding CR	27 (81.8)
Preceding PR	7 (18.2)
≥2 relapses, n (%)	8 (19)
Time remission to relapse (months), median [IQR]	
CR	29 [16-66]
PR	13 [3-32]

Results 2. Characteristics of LN patients with relapse

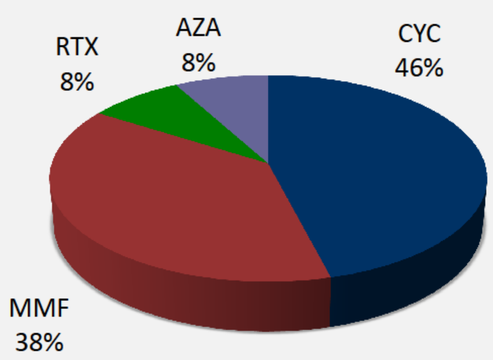
Relapsed LN patients, n 34	
Gender, n (%)	
Male	4 (11.8)
Female	30 (88.2)
Ethnicity, n (% of ethnic cohort)	
South Asian[1]	10 (28)
African or Afro-Caribbean Black	20 (32)
White Caucasian	4 (19)
Age (yrs), median [IQR}	
At SLE diagnosis	27 [19-40]
At LN diagnosis	29 [20-40]
Serology, n (%)	
ANA positive	34 (100)
ENA positive	24 (70.6)
RNP positive	15 (44.1)
Sm positive	11 (32.4)
Ro positive	14 (41.2)
Histological class, n (%)	
Mesangial proliferative LN (II)	12%
Focal/diffuse proliferative LN (III/IV)	64%
Membranous LN (V)	21%
FSGS	3%

[1] Indian Subcontinent (Bangladesh, India, Pakistan)

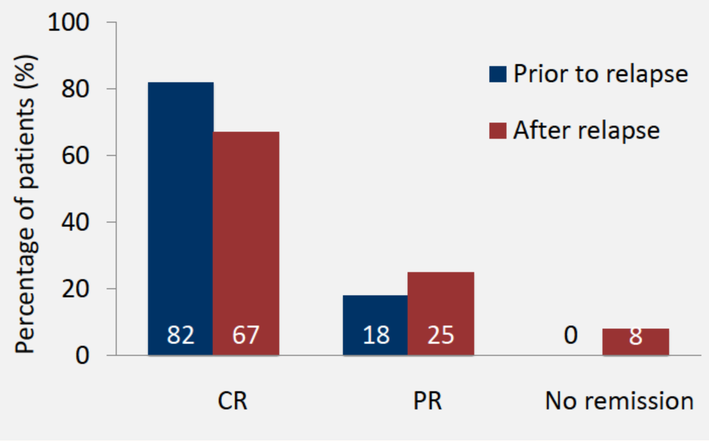
Results 4. Treatment of relapse



Results 5. Treatment with new immunosuppressive drug



Results 6. Outcome after relapse



Results 3. Maintenance treatment at time of LN relapse

Maintenance drug at time of relapse, n (%)	
MMF (median dose 2 g/day)	13 (42)
AZA (median dose 150 mg/day)	10 (32)
Pred (<10 mg/day)	22 (71)
Supportive therapy at time of relapse, n (%)	
ACEi/ARB	15 (48)
HCQ	13 (42)
Non-adherence to treatment, n (%)	7 (22)

Conclusion

Renal relapses are common (33%) in patients with seemingly quiescent LN in CR and PR. The relapse rate in our cohort is identical between those in partial or in complete remission but the former has a trend to relapse earlier. Non-adherence to treatment may be a major contributing factor to relapse (reported by 22% of our cohort). After relapse almost half of our cohort needed a new immunosupression regimen.

References

[1] Hahn BH et al. American College of Rheumatology Guidelines for screening, treatment, and management of lupus nephritis. Arthritis Care Res 2012.

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H) Clinical Nephrology, primary and secondary glomerulonephritis.

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