Effectiveness of MMF in steroid- resistant nephrosic syndromes in adult subjects

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OBJECTIVES

Mycophenolate Mofetil (MMF) is largely used as an immunosuppressant agent in renal transplantation maintenance and it has been only recently introduced in the treatment of autoimmune diseases, including idiopathic glomerular diseases. KDIGO guidelines suggest the use of the MMF as second line therapy, but this indication is based on little scientific evidences. Particularly, few is known about the MMF effect in patients affected from steroid-resistant FSGS and membranous disease (MGN). More encouraging results have been obtained in the treatment of the lupus nephritis (LES).

AIM OF OUR PERSPECTIVE OBSERVATIONAL STUDY WAS TO VERIFY THE EFFECTIVENESS OF ONE YEAR MMF TREATMENT IN A COHORT OF PATIENTS AFFECTED BY BIOPSY PROVEN FSGS, MGN AND LES, IN TERMS OF PROTEINURIA REDUCTION AND GFR IMPROVEMENT.

METHODS

Inclusion criteria were: steroid-resistant FSGS, MGN or LES, stable ACEi/ARBs treatment for more than 3 months and absence of heart failure and/or malignancy.

Patients started an MMF monotherapy of 1 g/day, two daily administrations for one year.

Clinical and laboratory parameters were assessed at 0, 3, 6 and 12 months after treatment initiation.

Data are express as mean ± DS and analysis were performed by ANOVA test for repeated measures. Therapy side-effects as infections, leukopenia, anaemia and gastrointestinal events were also recorded.

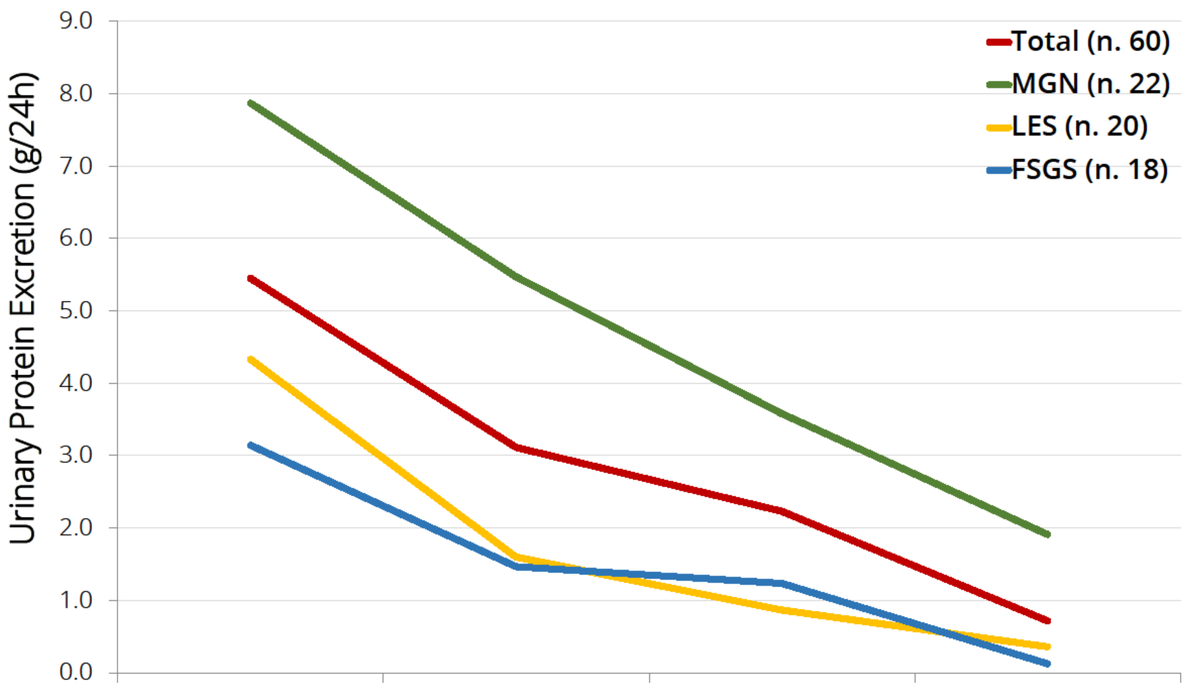
RESULTS

We enrolled a total of 60 patients: 22 MGN, 20 LES and 18 FSGS. We didn't observe any difference for BMI, Blood Pressure, eGFR among the 3 groups. Considering the whole group of patients, we observed a significant reduction of proteinuria 24h already after 3 months of treatment with MMF that was further improved at six and twelve months.

Stratifying patients according to glomerular disease, we observed that: i) MGN patients reached a significant proteinuria reduction already after 6 months of treatment; ii) LES patients already after 3 months; iii) GSF group after one year of treatment.

In the membranous Group we observed a 50% of complete remission and a 50% of partial remission after one year of therapy with MMF; in the lupus nephritis 71% of complete remission and 29% of partial remission; in the FSGS group 75% of complete remission and 25% of partial remission.

No difference were observed in incidence of leukopenia, anemia, infections and gastrointestinal troubles (2 episodes of diarrhea requiring MMF dose reduction to 500 mg/die and 6 cases of urinary tract infections) in the 3 groups of different diseases.



	Baseline	3 months	6 months	12 months
Total	5.45 ± 4.11	3.11 ± 3.45	2.23 ± 2.10	0.72 ± 1.03
MGN	7.87 ± 4.95	5.47 ± 4.31	3.58 ± 2.28	1.91 ± 1.49
LES	4.33 ± 2.24	1.60 ± 1.27	0.87 ± 0.50	0.36 ± 0.23
FSGS	3.14 ± 3.10	1.46 ± 1.74	1.23 ± 1.36	0.12 ± 0.08

Figure 1. Urinary Protein Excretion during the follow up in the entire cohort and by Glomerular Disease.

CONCLUSIONS

OUR DATA POINTED OUT HOW MMF CAN REPRESENT A VALID THERAPEUTIC APPROACH IN THE STEROID RESISTANT IDIOPATHIC GLOMERULONEPHRITIS AND IN LES NEPHROPATHY CONFIRMING THE KDIGO SUGGESTIONS.

FURTHER RCTS STUDIES ARE NECESSARY TO CONFIRM SUCH FINDINGS.

REFERENCES

- **Kidney Disease: Improving Global Outcomes (KDIGO) Glomerulonephritis Work Group.** KDIGO Clinical Practice Guideline for Glomerulonephritis. *Kidney Int, Suppl.* 2012; 2: 139–274.
- **Henderson LK, Masson P, Craig JC, et al.** Induction and maintenance treatment of proliferative lupus nephritis: a meta-analysis of randomized controlled trials. *Am J Kidney Dis.* 2013; 61(1): 74-87.
- **Hogan J, Schwenk MH, Radhakrishnan J.** Should mycophenolate mofetil replace cyclophosphamide as first-line therapy for severe lupus nephritis? *Kidney Int.* 2012; 82(12): 1256-60.
- **Bhimma R, Naicker E, Ramdial PK.** Mycophenolate mofetil therapy in children with idiopathic membranous nephropathy. *Clin Nephrol.* 2013; 80(6): 441-8.
- **Dussol B, Morange S, Burtey S, et al.** Mycophenolate mofetil monotherapy in membranous nephropathy: a 1-year randomized controlled trial. *Am J Kidney Dis.* 2008; 52(4): 699-705.
- **Sahin GM, Sahin S, Kantarci G, Ergin H.** Mycophenolate mofetil treatment for therapy-resistant glomerulopathies. *Nephrology (Carlton).* 2007 Jun;12(3):285-8.
- **Tang S, Ho YW, Leung CY, Lai KN.** Mycophenolate mofetil in the treatment of steroid-resistant primary focal segmental glomerulosclerosis. *J Nephrol.* 2005; 18(4): 429-32.

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