

# IS MYCOPHENOLATE MOFETIL COMBINED WITH LOW-DOSE PREDNISONE AN EFFECTIVE THERAPEUTIC OPTION FOR CHINESE PATIENTS WITH LEE CLASS III, IV, V IGA NEPHROPATHY?

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## Objectives

A few prospective randomized controlled trials have proved that mycophenolate mofetil (MMF) could induce lasting remission of proteinuria and preserve the glomerular filtration rate (GFR) in Chinese patients who had less advanced immunoglobulin A nephropathy (IgAN) [1,2]. But its tolerance and effectiveness in Chinese patients with Lee class III,IV,VIgAN remains unclear. The primary objective of this study was to evaluate the safety and efficacy of MMF combined with low-dose prednisone as a therapeutic regimen on urine proteinuria excretion and renal preservation in a Chinese population of patients with Lee class III, IV, V IgAN.

## Methods

This was a single-center study. Of 45 Lee class III,IV,V IgAN patients that were followed up in our renal centre in recently years (from 2006 to 2012) were included. The treatment regime was MMF (1~1.5g /day for six months, then 0.5~1.0g /day for the next six months, and then 0.25~0.5g /day for the last six months) plus low-dose prednisone (0.5 mg/kg.day for two months, then slowly tapered by 5 mg every two weeks until discontinuation). All patients received angiotensin inhibition medication. Total follow-up was 1 year. The change of urine total protein excretion and serum creatinine (Scr) was tested at the point of baseline and 12th months of the treatment in all patients. Estimated GFR (eGFR) was calculated according to the modified MDRD equation for Chinese.

## Results

At the point of follow-up one year, the urine total protein excretion was statistically lower than that of baseline in each group, respectively (Lee class III:  $0.22 \pm 0.14$  versus  $1.63 \pm 1.13$ ,  $P = 0.000$ , Lee class IV:  $0.41 \pm 0.32$  versus  $2.01 \pm 1.41$ ,  $P = 0.000$ , Lee class V:  $0.29 \pm 0.06$  versus  $2.82 \pm 1.32$ ,  $P = 0.000$ ). The remission rate of proteinuria in the 45 patients was 77.4 %, while in Lee class III patients was statistically higher than that in Lee class IV ( $90.9\%$  versus  $76.2\%$ ,  $P = 0.037$ ) and Lee class V patients ( $90.9\%$  versus  $50\%$ ,  $P = 0.046$ ), respectively. At the 12th month of follow-up, renal function remained stable compared with the baseline level in each group as evidenced by serum and eGFR, respectively. (serum creatinine: Lee class III:  $82.33 \pm 26.06$  versus  $90.41 \pm 38.86$ ,  $P = 0.196$ , Lee class IV:  $128.69 \pm 48.71$  versus  $144.26 \pm 50.92$ ,  $P = 0.353$ , Lee class V:  $193.51 \pm 69.08$  versus  $255.92 \pm 98.66$ ,  $P = 0.007$ ; eGFR: Lee class III:  $104.11 \pm 50.75$  versus  $95.63 \pm 41.68$ ,  $P = 0.396$ , Lee class IV:  $63.65 \pm 23.88$  versus  $54.64 \pm 23.36$ ,  $P = 0.136$ , Lee class V:  $53.38 \pm 21.33$  versus  $28.92 \pm 14.62$ ,  $P = 0.032$ ). There were four (8.9 %) severe pneumonia patients in the present study. All the four severe pneumonia developed in Lee class V group, while there was no severe patient in the Lee class III and IV group patients in the present study. The difference was statistically.

## Conclusions

MMF combined with low-dose prednisone can reduce proteinuria and preserve renal function in Chinese patients with Lee class III, IV, V IgA nephropathy. The worse the renal function, the lower the proteinuria remission rate. Chronically impaired renal function may be a risk factor for severe pneumonia. This finding needs to be further evaluated.

## References

- 1、 Tan C H R, Loh P T, Yang W S, et al. Mycophenolate mofetil in the treatment of IgA nephropathy: a systematic review. Singapore Med J 2008; 49 (10) : 780-783.
- 2、 Tang S, Leung JCK, Chan LYY, et al. Mycophenolate mofetil alleviates persistent proteinuria in IgA nephropathy. Kidney Int. 2005(86):802-812.

