

## MCGN in a LMIC: Epidemiologic profile and prognostic factors

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### Introduction:

Mesangiocapillary glomerulonephritis (MCGN) is a rare kidney disease with a poor prognosis. Several factors have been described associated with poor renal prognosis. The contribution of alpha smooth muscle actin ( $\alpha$ -SMA), which is involved in renal fibrogenesis, has been demonstrated in assessing the prognosis of several glomerular diseases, but few studies have concerned the MCGN.

The aim of our study is to determine the epidemiologic profile, to identify prognostic factors and to evaluate the contribution of  $\alpha$ -SMA in predicting the prognosis the MCGN.

### Patients and methods:

Our study is retrospective over a period of 16 years (January 1996- December 2011) including all cases of primary MCGN aged more than 15 years, collected at the nephrology department of the university hospital Hedi Chaker Sfax. We reviewed available renal biopsy for the study of the expression of  $\alpha$ -SMA by immunohistochemistry.

### Results:

We collected 118 cases of primary MCGN, with mean age of  $45 \pm 19$  years. The incidence of MCGN has decreased from 10 cases / year between 1996 and 1999 to 5 cases / year between 2008 and 2011. 78.8 % of patients had renal failure at the moment of diagnosis. The study of the expression of  $\alpha$ -SMA by immunohistochemistry was made in 16 cases. After a mean follow-up of  $51.9 \pm 44$  months, progression to end stage renal failure (ESRF) was observed in 43.5% of cases. Poor prognostic factors were initial renal failure and sclerotic glomeruli (respectively p at 0,04 and 0,03), but interstitial fibrosis degree was not a prognosis predictor parameter while important interstitial expression of  $\alpha$ -SMA was a marker of the evolution to ESRF (p = 0.03).

### Conclusion:

MCGN has significantly declined over recent years due to improve of socio-economic conditions. The presence of renal failure and sclerotic glomeruli at diagnosis were associated with a poor prognosis. The interstitial expression of  $\alpha$ -SMA may be a useful marker to predict the progression of primary MCGN even before the installation of fibrosis.