

# ANCA-associated vasculitis in end stage renal disease patients: A retrospective study

Wang Song, Zhu Ning, Wang Yue

Nephrology Department, Peking University Third Hospital, Beijing, China

## Objectives:

Antineutrophil cytoplasmic antibody-associated vasculitis (AAV) is a life threatening disease and an important cause of end-stage renal disease (ESRD). Renal replacement therapy is frequently required. However, the report of long term outcome of AAV in ESRD patients is limited .

## Methods:

We described 9 patients with AAV, who required maintenance dialysis in our hospital from January 1992 to December 2015. Mean age was  $62.5 \pm 13.4$  years (range 42–81) at the beginning of dialysis. There were 3 males and 6 females. The patients were diagnosed of AAV by pauci-immune crescentic glomerulonephritis or microscopic polyangiitis.

## Results:

The distribution according to ANCA was 8p-ANCA (88.9%) and 1 c-ANCA (11.1%) positive. Corticosteroids and cyclophosphamide were administered to 4 patients before or at the onset of dialysis. One patient had corticosteroids and mycophenolate mofetil. One patient received isolated corticosteroid therapy. Mean follow-up after first dialysis was  $54.2 \pm 40.1$  months (range 12–140). Seven patients were in hemodialysis (HD), and two patients were in peritoneal dialysis (PD). Relapses after beginning dialysis were observed in five patients (seven episode). Relapses rate was 0.02 episode/patient/year. Diffuse alveolar hemorrhage (DAH) was observed in 4 patients after the onset of maintenance dialysis. Although corticosteroids, cyclophosphamide and/or plasma exchange were administered, all 4 patients with DAH died. Two patients died of infection. Survival rates for 1, 2 and 5 year was 88.9%, 88.9% and 66.7%, respectively. Overall mortality at the end of the study was 66.7%. Compare with patient without DAH, DAH patients were older ( $69.8 \pm 10.0$  vs  $56.8 \pm 13.8$  years), had a higher Birmingham vasculitis score ( $25.5 \pm 5.3$  vs  $22.2 \pm 4.5$ ), got less Immunosuppressive therapy before or at the onset of dialysis, with reduced survival ( $43.0 \pm 24.7$  vs  $63.2 \pm 50.4$  months) . But due to the small number of patients in this series, there were no significant differences ( $p=0.162, 0.346, 0.490$  respectively).

## Conclusions:

The AAV patients under maintenance dialysis seem to have a worse prognosis compare with other causes of ESRD. The relapse rate after the beginning of dialysis is relatively high. The main causes of death are DAH and infection.

## References:

- Romeu M, Couchoud C, Delarozière JC, et al. Survival of patients with ANCA-associated vasculitis on chronic dialysis: data from the French REIN registry from 2002 to 2011. *QJM*.2014 ;107:545-55.
- Chen YX, Zhang W, Chen XN, et al. Clinical analysis of ANCA-associated renal vasculitis patients with chronic dialysis. *Clin Exp Rheumatol*. 2014 ;32:S5-10.
- Jose Luis Merino, Cristina Galeano, Beatriz Espejo, et al. A retrospective study on outcome of microscopic polyangiitis in chronic renal replacement therapy. *Nephrol Dial Transplant* 2011; 26: 1360–1366