

was started 16 months ago, the patient has not required any hospital admission, performs a normal physical activity, and has substantially recovered renal function. Hemodialysis discontinuation is not considered appropriate.

While it is true that our patients could be considered in some case potentially recoverable, considering the severity of the baseline condition and/or underlying disease, no statement could be made a priori. Special mention should be made of the improved quality of life and absence of hospital admissions once replacement therapy was started. The indication for monitoring of residual function is emphasized.^{9,10}

1. Sekkarie MA, Port FK, Wolfe RA, Guire K et al. Recovery from end-stage renal disease. *Am J Kidney Dis* 1990; 15: 61-5.
2. Levy JB, Hammad T, Coulthart A, Dougan T, Pusey CD. Clinical features and outcome of patients with both ANCA and anti-GBM antibodies. *Kidney Int* 2004; 66 (4): 1535-40.
3. Jenette JC. Rapidly progressive crescentic glomerulonephritis. *Kidney Int* 2003; 63 (3): 1164-77.
4. Serra A, Romero R. Fracaso renal agudo en las vasculitis sistémicas asociadas a anticuerpos anticitoplasma de los neutrófilos (ANCA) en pacientes de edad avanzada. *Nefrología* 2001; 21: 1-8.
5. Knudsen LM, Hjorth M, Hippe E. Renal failure in multiple myeloma: reversibility and impact on the prognosis. Nordic Myeloma Study Group. *Eur J Haematol* 2000; 65 (3): 175-81.
6. Bladé J, Fernández-Llama P, Bosch F, Montolíu J et al. Renal failure in multiple myeloma: presenting features and predictors of outcome in 94 patients from a single institution. *Arch Intern Med* 1998; 158 (17): 1889-93.
7. Marenzi G, Grazi M, Assanelli, Campodonico J et al. Circulatory response to fluid overload removal by extracorporeal ultrafiltration in refractory congestive heart failure. *J Am Coll Cardiol* 2001; 38 (4): 963-8.
8. Sheppard R, Panyon K, Pohwani AL, Kapoor A et al. Intermittent outpatient ultrafiltration for the treatment of severe refractory congestive heart failure. *J Card Fail* 2004; 10 (5): 380-3.
9. Gámez C, Teruel JL, Ortuño J. Evolución de la función renal residual en enfermos tratados con hemodiálisis. *Nefrología* 1992; 12: 125-9.
10. Rodríguez Benítez P, Gómez Campderá FJ, Rengel M, Anaya F. Recuperación de la función renal en pacientes en programa de diálisis. *Nefrología* 2002; 22 (1): 92-3.

L. Quiñones Ortiz, A. Suárez Laurés, A. Pobes Martínez and R. Forascepi Roza
 Servicio de Nefrología. Hospital Cabueñes. Gijón.
Correspondence: Luis Quiñones Ortiz. *luys-
 quio@hotmail.com*. Hospital Cabueñes. Camino de los Prados, 395. 33203 Gijón (Asturias). España.

Recovery of total immunoglobulin and immunoglobulin subclasses in nephrotic syndrome: deflazacort vs methylprednisone

Nefrología 2008; 28 (5) 563

To the editor: Hypogammaglobulinemia in nephrotic syndrome (NS) is a condition attributable to increased catabolism and urinary loss of immunoglobulins.^{1,2}

Patients with NS have an increased risk of infection, primarily caused by capsulated germs (pneumococci, *Haemophilus influenzae*).^{3,4} There is evidence suggesting that IgG2 are antibodies protecting against pneumococci.

Our purpose was to study recovery of the different immunoglobulin subclasses in patients with NS treated with methylprednisone and deflazacort during remission and relapse.

PATIENTS AND METHODS

Eleven patients with a mean age of 48 months (range, 16-52 months) were studied. An interventional, single blind, clinical study, randomized for treatment start and with treatment crossover after the first relapse, was designed.

Methylprednisone (MPD) was given at 48 mg/m²/day for 6 weeks, followed by 2/3 of the dose every other day for the next 6 weeks.

The equivalent dose of deflazacort (DFZ) was 72 mg/m²/day (maximum 90 mg/day), with the same therapeutic scheme.

Blood samples were taken at relapse and 40 days after remission was achieved to measure total IgG and its subclasses by the radial immunodiffusion method.

RESULTS

Mean times on remission were 7.8 ± 0.36 days with MPD and 8.3 ± 0.22 days with DFZ.

Mean times to relapse were 85 ± 3.8 days with MPD and 102 ± 4.19 days with DFZ.

Both total IgG and IgG1 similarly recovered with both corticosteroids, but

IgG2 and IgG3 only significantly increased with DFZ. Percent recovery of IgG and its subclasses was asymmetric during remission.

IgG1 showed the greatest recovery, while IgG2 reached 50% of normal value. The same imbalance was found with both treatments.

While this was not considered as an objective, it may be stated that the incidence rate of infection by capsulated germs was not significant with both corticosteroids (p 0.12) and that less adverse effects occurred when DFZ was used (hypertrichosis, Cushingoid appearance, ocular hypertension, hyperglycemia).

CONCLUSIONS

We found an imbalance in recovery of IgG subclasses during remission of NS treated with both corticosteroids, but a better recovery of such levels was achieved with DFZ.

1. Longsworth IG, MacInnes DA. An electrophoretic study of nephrotic sera and urine. *J Exp Med* 1998; 71: 77-82.
2. Oxelius V-A. IgG Subclass levels in infancy and childhood. *Acta Paediatr Scand* 1979; 68: 23-27.
3. Lowy Y, Brezin C, Neauport-Sautes C, Theze J, Fridman WH. Isotype regulation of antibody production. T-cell hybrids can be selectively induced to produce IgG1 and IgG2 subclass-specific suppressive immunoglobulin-binding factors. *Proc Natl Acad Sci USA* 2003; 80 (8): 2323-7.
4. Lowy Y, Theze J. Regulation of IgG1 and IgG2 subclass expression by adjuvant-activated splenic suppressor T-cell. *Cell Immunol* 1999; 91 (2):467-76.

M. Liern, S. Diéguez and C. Canepa
 Servicio de Nefrología. Hospital de Niños Ricardo Gutiérrez. Buenos Aires. Argentina.

Correspondence: José Miguel Liern. *jliern@yahoo.com*. Hospital General de Niños Ricardo Gutiérrez. Alberti, 1880. 1714 Ituzaingo (Buenos Aires). Argentina.

Rhabdomyolysis after correction of severe hyponatremia due to an attack of acute intermittent porphyria

Nefrología 2008; 28 (5) 563-564

To the editor: A vascular mechanism responsible for renal damage during at-