

operating characteristic analysis, however, both general methods better predicted mortality than the ARF-specific methods.

In conclusion, the ARF-specific scoring methods are not good predictors of in-hospital mortality (or, by implication, of overall ARF-related mortality). The SOFA score is probably the most useful for classifying patients with ARF in a clinical setting, but maximum RIFLE score might have some utility as a standardized definition of ARF.

**Original article** Åhlström A *et al.* (2006) Comparison of 2 acute renal failure severity scores to general scoring systems in the critically ill. *Am J Kidney Dis* **48**: 262–268

### Serum CD30 and neopterin predict CAN: impact of immunosuppressant type

Immunosuppressive treatment tailored to individual renal transplant recipients might improve long-term graft and patient survival. Developing immunological tests to predict chronic allograft nephropathy (CAN), thereby identifying patients who could benefit from intensified immunosuppression, is of considerable interest.

Levels of serum soluble CD30 and neopterin—markers of T-cell activation, which has an important role in CAN—were prospectively assessed in 84 renal transplant recipients randomized to one of three immunosuppressive regimens involving ciclosporin and azathioprine, ciclosporin and mycophenolate mofetil, or tacrolimus and azathioprine. At 1 year, overall patient survival was 100% and overall graft survival was 95%.

Levels of serum CD30 and neopterin were significantly higher in patients whose glomerular filtration rate subsequently decreased during 2 years of follow-up ( $P=0.02$  and  $P<0.0005$ , respectively). High levels of serum CD30 and neopterin ( $\geq 60$  U/ml and  $\geq 200$  nmol/mg, respectively) at 1 year were also associated with CAN in eight patients at 2 years ( $P<0.0005$  and  $P=0.001$ , respectively). Together, 1-year serum CD30 and neopterin concentrations had a positive predictive value for CAN at 2 years of 0.71, and a negative predictive value of 0.96.

As only tacrolimus was independently associated with downregulation of serum CD30 expression at 1 year, the authors

suggest that this calcineurin inhibitor might be the immunosuppressant of choice for patients with high pretransplantation levels of this risk factor for CAN.

**Original article** Weimer R *et al.* (2006) Post-transplant sCD30 and neopterin as predictors of chronic allograft nephropathy: impact of different immunosuppressive regimens. *Am J Transplant* **6**: 1865–1874

### Long-term study of short daily hemodialysis records low levels of morbidity and mortality

Conventional hemodialysis protocols for end-stage renal disease (ESRD) usually comprise thrice-weekly in-center sessions. Evidence is accumulating that more-frequent dialysis might offer advantages in terms of reduced morbidity and mortality.

Researchers at the University of São Paulo carried out a prospective observational study of high-efficiency short daily hemodialysis (SDHD) in 26 patients with a mean age of 35.6 years. Glomerulonephritis was the main cause of ESRD. SDHD using a high-flux polysulfone dialyzer was carried out six times a week in 1.5–2 h sessions.

The mean duration of SDHD treatment was 33.6 months and patient survival was 100%. Complication rates with regard to vascular access (89% of patients were dialyzed via native arteriovenous fistulae) were very low (0.04 failures/patient-year). For the 15 patients remaining on SDHD beyond 36 months, vascular access survival was 89%. Rates of non-vascular-access-related morbidity associated with long-term SDHD were low; 0.27 hospitalizations/patient-year and 1.24 days of hospitalization/patient-year were recorded.

The researchers conclude that SDHD might be a suitable alternative to conventional hemodialysis for patients with ESRD. The investigators highlight the fact that the population studied was relatively young and had few comorbidities; however, as SDHD can be completed in shorter sessions, allowing a higher level of social and professional integration, younger individuals wishing to undertake regular work might prove ideal candidates for this dialysis modality.

**Original article** Castro MCM *et al.* (2006) High-efficiency short daily haemodialysis—morbidity and mortality rate in a long-term study. *Nephrol Dial Transplant* **21**: 2232–2238