## **RESEARCH HIGHLIGHTS**

## www.nature.com/clinicalpractice/neph

and 9 months for women. Inclusion of a nontestosterone-treated male control group in the study was considered unethical as the investigators had previously shown the efficacy of testosterone in this setting.

Sperm counts decreased significantly in all men during immunosuppressive therapy (P<0.001), but increased progressively after completion of therapy. All but one man had a normal sperm count 12 months after treatment cessation. All women experienced amenorrhea during cyclophosphamide therapy. Women who had received triptorelin started regular menstruation on cyclophosphamide cessation; six of these women conceived and had successful pregnancies. However, the four women who had not received triptorelin exhibited sustained amenorrhea for >12 months. In addition, these women showed increased levels of follicle-stimulating hormone and luteinizing hormone, and decreased estradiol levels at the end of follow-up. No adverse effects related to either testosterone or triptorelin were reported.

**Original article** Cigni A *et al.* (2008) Hormonal strategies for fertility preservation in patients receiving cyclophosphamide to treat glomerulonephritis: a nonrandomized trial and review of the literature. *Am J Kidney Dis* **52:** 887–896

## Nocturnal hemodialysis can help to restore normal sleeping patterns

Sleep problems are common in patients with end-stage renal disease. Melatonin secretion rhythms, which control normal circadian sleep-wake patterns, are often disrupted in patients treated with conventional daytime hemodialysis. Koch and colleagues investigated whether switching to nocturnal hemodialysis can restore normal melatonin rhythms and sleep-wake parameters.

Data from 13 patients who switched from conventional thrice-weekly 3–4h sessions of daytime hemodialysis to four 8h in-center sessions of nocturnal hemodialysis per week (median age 58 years, 8 men) were assessed. At baseline (i.e. on conventional hemodialysis) and after 6 months of nocturnal hemodialysis, participants completed validated sleep questionnaires, underwent polysomnography, and their salivary melatonin concentration was measured. Patients reported an improvement in sleep quality and daytime functioning after switching to nocturnal hemodialysis. These findings were confirmed by polysomnography, which revealed significant improvements in median sleep efficiency and deep sleep (from 78.1% to 83.0%, and from 15.4% to 21.2%, respectively). Circadian melatonin rhythms, measured in 12 patients, were impaired at baseline, whereas after 6 months of nocturnal hemodialysis the nocturnal melatonin surge was restored in most patients. The authors also noted an improvement in the efficacy of dialysis when patients switched from conventional to nocturnal hemodialysis.

Koch *et al.* explain that the sleep-related advantages of nocturnal hemodialysis might result from the activation of sleep-inducing mechanisms, such as body cooling, and the resynchronization of sleep-wake patterns with the circadian cycle.

**Original article** Koch BCP *et al.* (2008) Effects of nocturnal hemodialysis on melatonin rhythm and sleep-wake behavior: an uncontrolled trial. *Am J Kidney Dis* [doi:10.1053// j.ajkd.2008.08.006]

## Istanbul declaration outlines measures to prevent transplant tourism

Transplant tourism is a growing problem, as discussed by David J Cohen on pages 128– 129 of this issue. In 2004, the WHO appealed to its member states to protect 'the poorest and vulnerable groups' from this practice. Now, an international summit convened by the Transplantation Society and the International Society of Nephrology has resulted in the publication of a declaration that offers recommendations to facilitate this goal.

The summit took place in Istanbul from 30 April to 2 May 2008 and was attended by 152 experts, including nephrologists, ethicists, government officials and representatives of transplantation societies. The participants concluded that organ trafficking and transplant tourism disproportionately affect the poor and vulnerable, and should, therefore, be prohibited; delegates also agreed that any practices that aid or encourage transplant commercialism should be banned.

To reduce transplant tourism, all countries should implement programs to screen for,