of home fingerprick sampling should facilitate its uptake into routine practice.

Original article Cheung CY *et al.* (2007) Dried blood spot measurement: application in tacrolimus monitoring using limited sampling strategy and abbreviated AUC estimation. *Transpl Int* [doi:10.1111/j.1432-2277.2007.00584.x]

Percutaneous ethanol injections for post-transplantation secondary hyperparathyroidism

Percutaneous ethanol injection therapy (PEIT) to selectively destroy nodular parathyroid glands is a less-invasive alternative to parathyroidectomy in dialysis patients with secondary hyperparathyroidism. Douthat *et al.* found that PEIT might also be useful in kidney transplant recipients.

Their study involved eight renal allograft recipients with persistent hyperparathyroidism that was resistant to medical therapy. At least one parathyroid nodule was visible in each patient during ultrasonography. Aliquots of 95% ethanol (volume at least equivalent to that of the target area) were injected into the largest parathyroid nodule; further injections were performed in patients with more than one large nodule (>0.1 cm^3).

A mean of 1.38 nodules were injected per patient. Technical difficulties precluded PEIT completion in one patient. The mean intact parathyroid hormone (iPTH) level decreased significantly following PEIT (from 286.9 ± 107.2 ng/l immediately before PEIT to 154.6 ± 42.2 ng/l 1–7 days after PEIT; P <0.01). The mean serum calcium level also decreased significantly (from 2.85 ± 0.1 mmol/l [11.4 ± 0.5 mg/dl] to 2.6 ± 0.05 mmol/l [10.3 ± 0.2 mg/dl]; P <0.01). iPTH and calcium were still decreased at final follow-up, a mean 8.0 ± 2.8 months after PEIT. Mean serum alkaline phosphatase level also showed a significant decrease 1–7 days after PEIT (P <0.05) and at final follow-up (P <0.05). A nonsignificant trend towards increased serum phosphate levels was observed at final follow-up. The magnitude of the reduction in iPTH levels was positively correlated with total ethanol volume (coefficient of correlation r = 0.94; P <0.0001). Renal function did not change significantly during the study, and complications were minor (neck discomfort in four patients and transient dysphonia in one patient).

Original article Douthat WG *et al.* (2007) Percutaneous ethanol injection therapy in post-transplant patients with secondary hyperparathyroidism. *Transpl Int* **20:** 1031–1035

Hypernatremia: an independent risk factor for death in the ICU

Lindner *et al.* have screened the database of a Viennese intensive care unit (ICU) to determine the prevalence of hypernatremia, its impact on mortality, and whether it affects length of stay.

Hypernatremia (defined as a serum sodium level >149 mmol/l) occurred in 90 (9%) of 981 patients admitted to the ICU during the 35-month study period; 69 (7%) cases developed during the ICU stay. Hypernatremia lasted on average for 2 days (range 1–10 days). ICU-acquired hypernatremia was shown to be an independent risk factor for 28-day mortality in multivariable analysis (relative risk 1.8, 95% CI 1.1–2.9; P = 0.03). Mortality was 43% and 39% respectively for the patients who had hypernatremia on admission or developed hypernatremia during their ICU stay, compared with 24% in patients without hypernatremia (P <0.01). The most common causes of death in patients with hypernatremia were multiorgan failure, circulatory failure, and septic shock. Development of hypernatremia during the ICU stay was also significantly associated with increased length of ICU stay; mean length of stay was 20 ± 16 days in these patients, compared with only 8 ± 10 days in those without hypernatremia (P <0.001). A positive sodium balance and defects in renal concentration were largely responsible for the development of the condition.

Assessment of renal electrolyte loss is not standard practice in many ICUs. The authors highlight the importance of evaluation of fluid and electrolyte balance so that hypernatremia can be avoided, or rigorously treated as early as possible.

Original article Lindner G *et al.* (2007) Hypernatremia in the critically ill is an independent risk factor for mortality. *Am J Kidney Dis* **50:** 952–957