Fever with fulminant skin necrosis and digital gangrene in a uraemic woman

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A 40-year-old woman with type 2 diabetes mellitus and hypertension was admitted because of general malaise for the previous 3 months. Diabetic nephropathy with uraemia (blood urea nitrogen 78 mg/dl, serum creatinine 8.2 mg/dl) and secondary hyperparathyroidism (serum intact parathyroid hormone level 1920 pg/ml) were diagnosed. However, fever with rapidly progressive painful erythematous plaques, followed by central necrosis on both legs (Figure 1) occurred during the second week of hospitalization. Simultaneously, progressive gangrene of her right big toe (Figure 1) was also noticed. Calciphylaxis (i.e. calcific uraemic arteriolopathy) was highly suspected. Empiric antibiotics were administered for suspicious secondary infection of the leg lesions, but the fever (37.2–38.4°C) persisted. After disarticulation of the right big toe and debridement of necrotic tissues of the leg (Figure 2), the fever subsided. The pathology of all tissues disclosed calcification of the media and occlusive hyperplasia of the intima of small-to-medium sized arteries, suggesting calciphylaxis. Emergent total parathyroidectomy with autotransplantation was thus performed (Figure 3), and the pathology revealed encapsular nodular hyperplasia of the four parathyroid glands. She thereafter underwent regular haemodialysis and hyperbaric oxygen therapy. After aggressive wound...
care with nutritional support, the wounds of her legs and right foot healed well, 9 months and 15 months later, respectively.

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Fig. 3. Emergent total parathyroidectomy with autotransplantation was performed, and the pathology revealed encapsular nodular hyperplasia of the four markedly enlarged parathyroid glands (right upper gland 3.7 gm, right lower gland 2.5 gm, left upper gland 2.2 gm, left lower gland 3.0 gm).