

IMAGES IN CLINICAL MEDICINE

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Uremic Frost in End-Stage Renal Disease



A 39-YEAR-OLD MAN WITH END-STAGE RENAL DISEASE PRESENTED TO THE emergency department with anorexia, nausea, vomiting, and oliguria. Five months earlier, he had stopped attending his regular hemodialysis sessions; he reported that he had thought that the sessions were not needed because he continued to have urine output. On physical examination, his blood pressure was 167/80 mm Hg. He was lethargic and had slowed speech and edema of the legs, and his breath had a urine-like odor. His skin had diffuse crystalline white deposits that were distributed mainly on his face (Panel A), abdomen (Panel B), and arms. Laboratory studies showed a blood urea nitrogen level of 231 mg per deciliter (82.5 mmol per liter), a creatinine level of 20.0 mg per deciliter (1770 μ mol per liter), a sodium level of 125 mmol per liter, and a potassium level of 7.7 mmol per liter. The patient underwent immediate hemodialysis. Uremic frost is associated with severe azotemia and results from crystallization of urea on the skin after sweat evaporates. It is a rare finding in locations where hemodialysis is widely available. The patient's lethargy abated as he resumed regular hemodialysis sessions, and he had complete regression of the uremic frost at 2 weeks after presentation.

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