

IMAGES IN CLINICAL MEDICINE

Purple Urine

A 76-YEAR-OLD MALE NURSING HOME resident with dementia and end-stage renal disease who was undergoing hemodialysis was admitted to the hospital after a syncopal episode that occurred during dialysis. Torsades de pointes was noted on telemetry monitoring. When a urinary catheter was placed, purple urine was drained. The patient had no fever, lower urinary tract symptoms, or leukocytosis. The urinalysis showed a pH of 9.0 and bacteriuria but no hematuria or pyuria. The urine culture showed 10^5 colony-forming units or more per milliliter for both *Pseudomonas aeruginosa* and enterococcus species. Over the next 3 days, the urine gradually became yellow and clear, in the absence of antibiotic treatment. Purple discoloration can occur in alkaline urine as a result of the degradation of indoxyl sulfate (indican), a metabolite of dietary tryptophan, into indigo (which is blue) and indirubin (which is red) by bacteria such as *Providencia stuartii*, *Klebsiella pneumoniae*, *P. aeruginosa*, *Escherichia coli*, and enterococcus species. The clinical course is benign, and the urine typically clears with resolution of the bacteriuria and acidification of the urine. This patient had no further episodes of torsades de pointes and returned to the nursing home in stable condition.

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