

Incidental nephrograms in acute renal failure

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Case presentation

A 33-year-old African-American female was admitted to the hospital for the evaluation of severe dyspnea, chest and back pain, nausea, vomiting, diarrhea, and fever. She reported a vague history of renal disease and systemic lupus erythematosus, and had a creatinine of 0.65 mg/dL on admission. Her chest pain and dyspnea rapidly worsened, and she required emergent intubation after her oxygen saturation dropped to 72% while breathing room air. Assisted mechanical ventilation was started. She underwent blood, urine and sputum cultures and empiric antibiotics were begun. In addition her initial blood pressure was 80/50 torr. She remained hypotensive despite fluid administration, with persistent systolic blood pressure of 70 torr. On hospital day two, her serum creatinine level had increased to 1.76 mg/dL. At that point, due to concerns of a possible pulmonary embolism (due to an elevated arterial-alveolar gradient), she underwent a computer tomography (CT) with intravenous contrast. No major pulmonary vessel obstruction was found. The following day, she was found to have a serum creatinine of 3.09 mg/dL. An abdominal radiograph (KUB) was performed at that time to evaluate the position of a feeding tube placement (**Figure 1**). Such imaging study revealed incidental bilateral nephrograms resulting from retention of the previous day intravenous contrast administration in the setting of renal dysfunction. A urine analysis sediment revealed muddy, granular casts consistent with acute tubular necrosis. By hospital day 5, the nephrograms were fading but still visible on plain

radiographs. The patient's clinical course improved, she was successfully weaned from assisted ventilation after being treated for severe sepsis and her renal function eventually recovered.

Key words: Acute renal failure, nephrograms, acute kidney injury, contrast

Figure 1. Bilateral nephrograms seen on plain radiograph



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